11/15/82 R4105-5.44A

The Conference Board

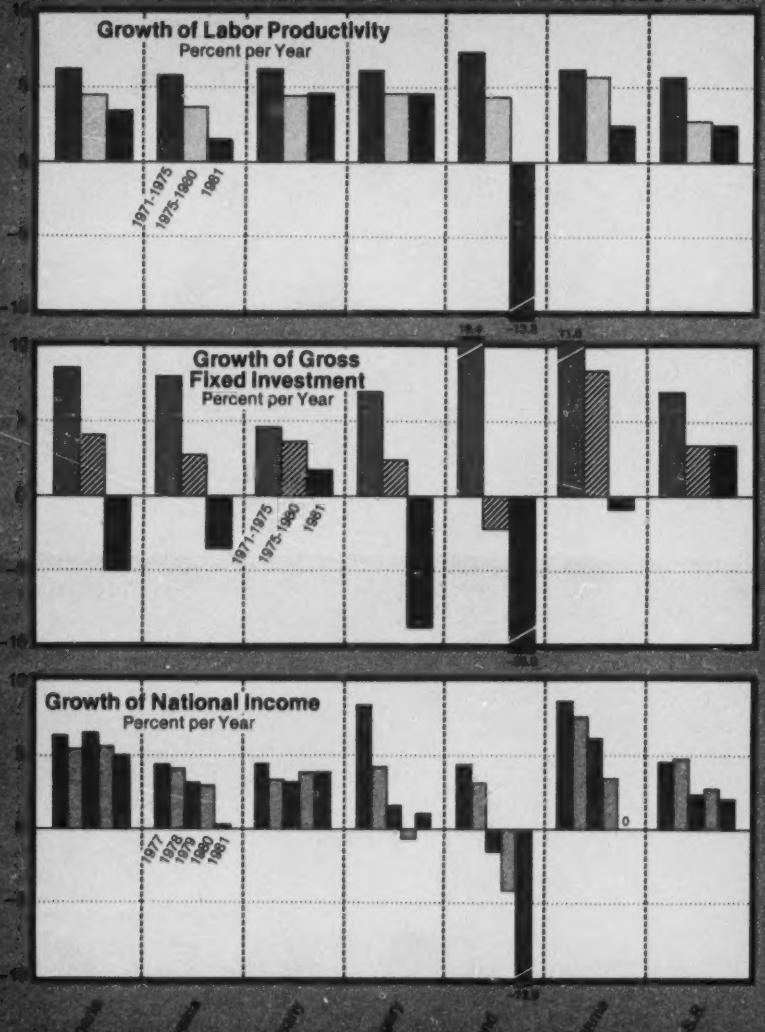
Eastern Europe's Trade with the West

Economic Road Maps
Nos. 1936-1937

October, 1982

Until the 1960's, the European member countries of COMECON—the centrally planned economies of Eastern Europe—pursued a policy of economic autarky, regarding foreign trade as merely an outlet for surplus domestic production or a way to cover temporary shortfalls. This attitude changed slowly, but in the 1970's East-West trade achieved sufficient momentum to expand from a combined total of $14 billion in 1970 to almost $100 billion in 1980. While the COMECON countries generally have attempted, within their planning schedules, to achieve a balance between each pair of trading partners, trade with the industrial countries of the West has involved continually growing deficits for COMECON. These have accumulated mainly because the COMECON countries have been unable to expand their exports sufficiently to pay for the purchase of increasingly expensive Western technology, grain and other agricultural commodities.

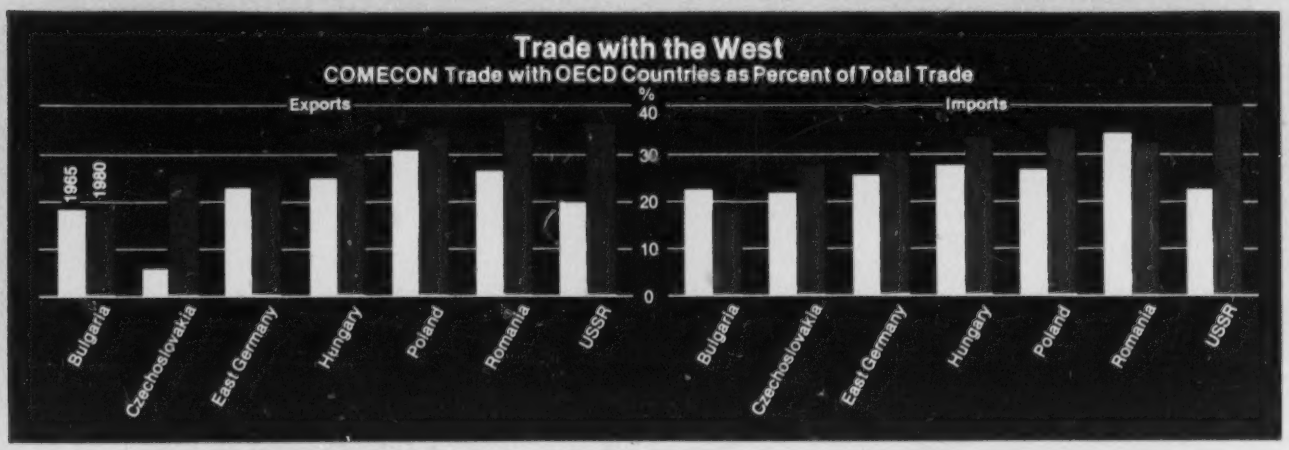
Recent Record of COMECON Countries

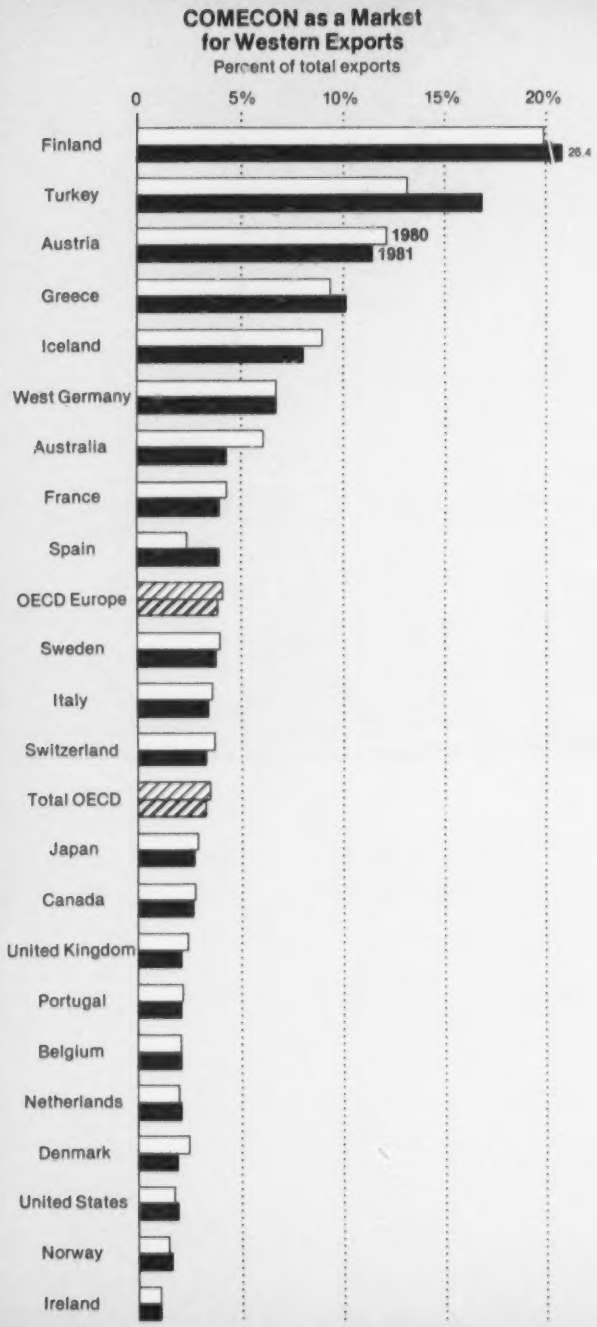


COMECON Countries' Share in World Totals

A recent study, prepared for the Joint Economic Committee of the United States Congress, predicts that the COMECON countries will continue to register growing deficits in their trade with the industrial West. In turn, this will tend to increase their need for credits from Western lenders.

Economic growth in the centrally planned economies of Eastern Europe has been slowing down over the past decade, and recently released plans for 1981-1985 point to a further slowing. These developments reflect, above all, the fact that one major source of growth in the past—a growing labor force—has been largely exhausted. In addition, what labor is available is often utilized in uneconomic ways. Thus, a recent Soviet estimate indicates that about 40% of work that could be automated is still being done manually in Soviet industry. According to another report, nearly one million workers now in Soviet forestry could be released if work were sufficiently mechanized.

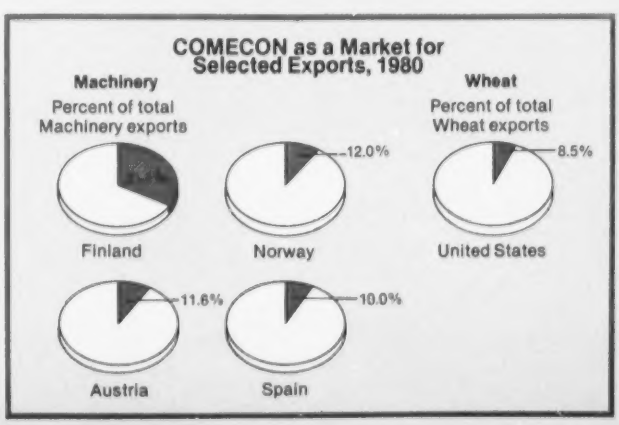




The authorities in many COMECON countries have had to rely on tapping Western resources, which have been obtained through credits for capital goods purchases and transfers of technology. Trade with the West has become an important aspect of economic life.

The dependence of the European COMECON countries on trade with the industrial countries has increased since the early 1970's. For the Western countries, on the other hand, the share of trade with COMECON has not changed very much. For individual countries, however, COMECON trade can be quite important. Finland, for instance, ships one-quarter of its total exports and nearly one-third of its machinery exports to Eastern Europe. One-third of all the industrial countries sell more than 4% of their exports—and seven of these countries sell over 5% of their machinery exports—to Eastern Europe. Over 8% of U.S. wheat exports go to Eastern Europe.

With regard to Western imports from COMECON, Finland similarly shows the largest dependence, with one-quarter of its total imports and nearly two-thirds of its energy imports coming from Eastern Europe. One-third of the Western countries rely on Eastern Europe for over 5% of their total imports. The West's dependence on COMECON is most striking in energy. Western Europe as a whole now derives more than 10% of its total energy imports from COMECON countries, with six countries showing a higher share. Once the gas pipeline from Western Siberia is completed, these shares are expected to rise. France and West Germany, for example, will then depend on the Soviet Union for over one-third of their



natural gas consumption and for more than 5% of their total energy consumption.

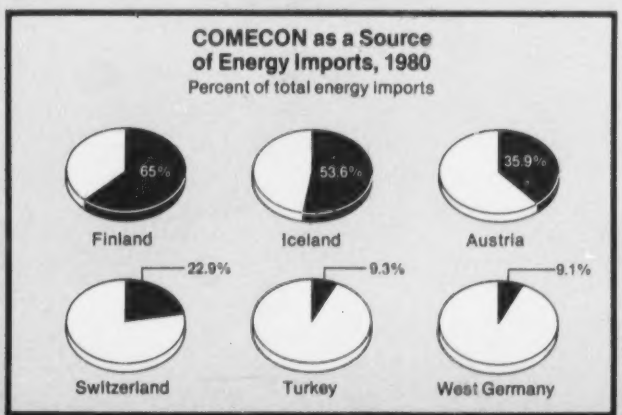
East-West trade grew more rapidly during the past decade than the overall foreign trade of either side. In 1981, however, East-West trade increased only slightly, and in real terms declined for the first time since the early 1950's. Within COMECON, the share of trade with the West ranges from under 20% for Bulgaria to more than 35% for Romania, Poland and the U.S.S.R. The Soviet Union accounts for about half of COMECON's total trade with the West.

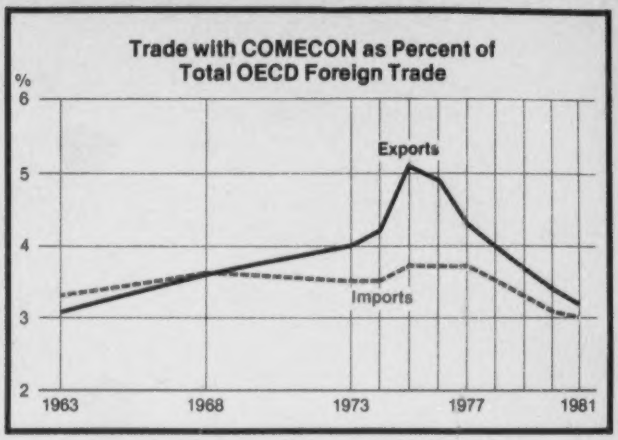
The indebtedness of the European COMECON countries to the West grew from about $6 billion in the early 1970's to close to $80 billion last year. This increase in capital imports from the West reflected continued deficits with the West in both trade and services. The situation was aggravated by the rise in world interest rates, which increased the cost of servicing the debts.

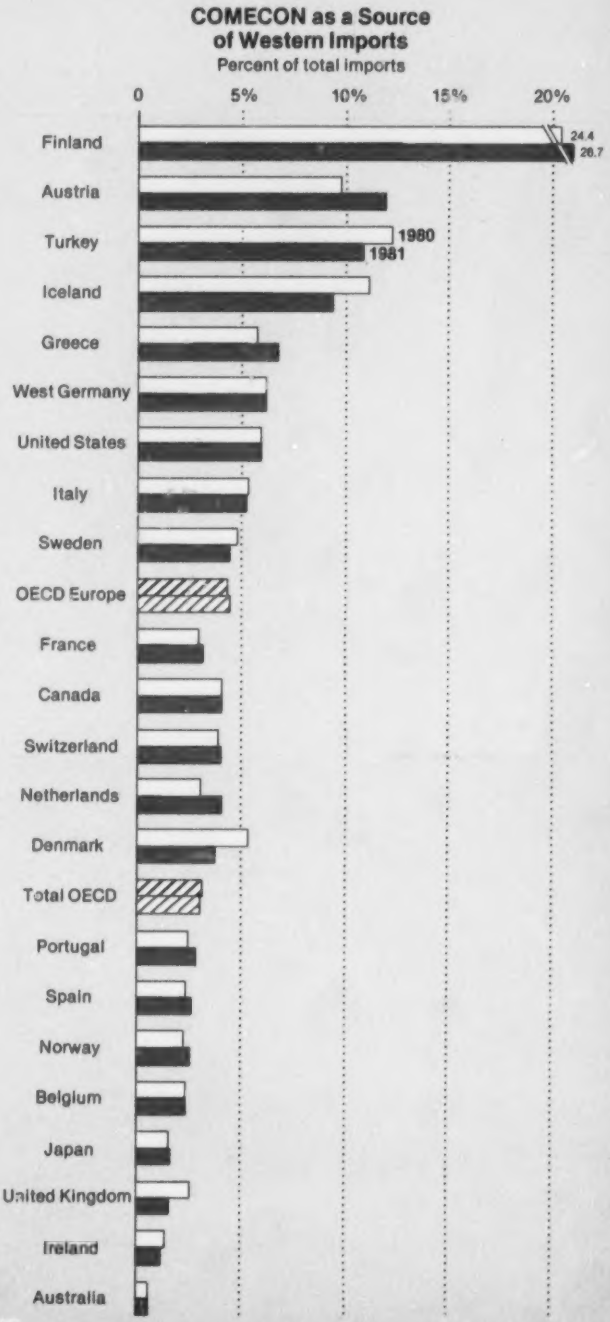
The present indebtedness to the West represents a large percentage of gross domestic product for most COMECON countries. Hungary's debt now equals more than 18% of GDP, and Romania's 21 percent. If the projected debt increases prove correct, Hungary's debt could equal more than half of GDP by 1985, and that of Poland and Romania around one-third. For all countries except the Soviet Union, outstanding indebtedness already is larger than annual export earnings from the West.

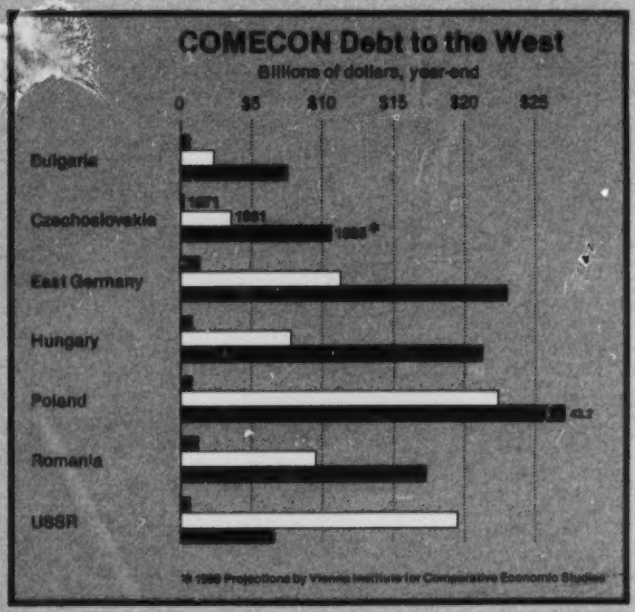
The COMECON countries rank relatively low in country risk comparisons for the granting of credits. Even Czechoslovakia—the least indebted of the group, with a debt service ratio of only 25%—would need to increase hard-currency exports by 25% a year while showing zero growth in imports in order to pay its debts. Such increases in export growth are clearly out of reach, while compelling needs are unlikely to allow imports to remain fixed at present levels. With even the least-indebted COMECON country not expected to repay its debts in the near future, the remaining members of the group are certainly not likely to.

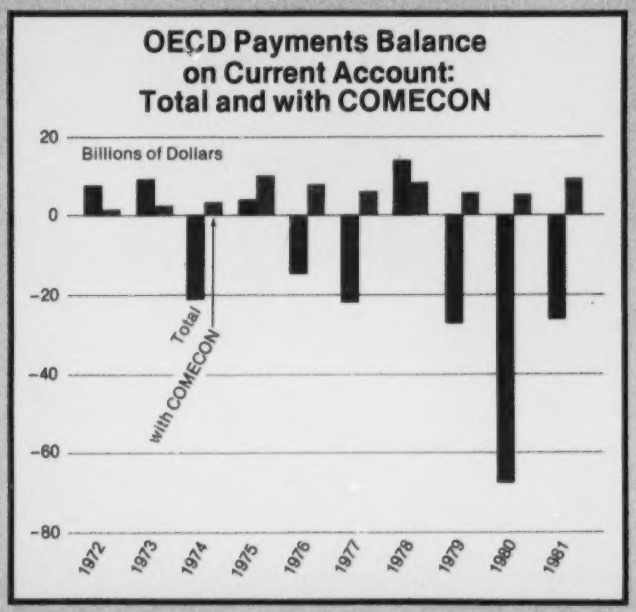
The prospects are for continued but unspectacular growth in East-West trade. Future development on both sides depends on the interplay between the desires and needs to expand the trade and the factors that necessarily limit it. The COMECON countries have great interest in











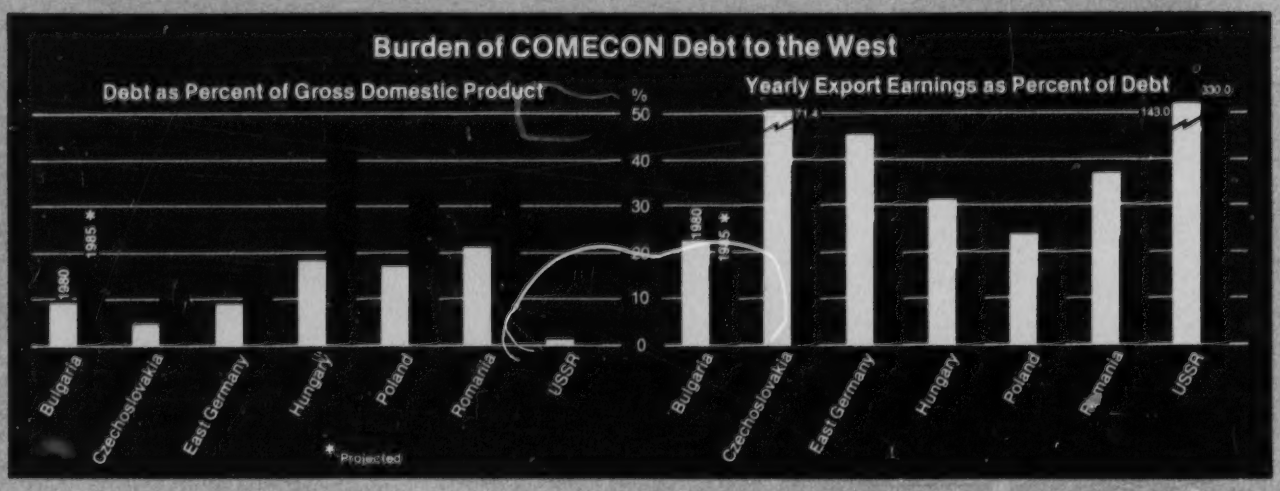
developing the trade. They want to import sophisticated technology to raise their standards of production, to import food and other products to ease production bottlenecks, and to acquire advantageous credits. But their slowing economic growth will limit production of export goods. They also have problems producing goods of a high enough quality to meet Western standards and compete in Western markets. Their difficulties in repaying credits received in the past and in obtaining future credits may also limit trade greatly.

The Western industrial countries are also interested in developing East-West trade. They are seeking raw materials and energy to decrease their dependence on Middle Eastern oil, as well as profits and jobs to counter the effect of the recession. The limiting factors on the Western side are the inconvenience of out-of-pocket, the low acceptability of COMECON goods, at least fear of importing economic difficulties from COMECON countries if dependence on East-West trade grows.

Josef Adamek

Note: COMECON - Council for Mutual Economic Assistance.

Sources: Organization for Economic Cooperation and Development; Vienna Institute for Comparative Economic Studies; The Economist; The Conference Board.



ECONOMIC ROAD MAPS

Eva Galan, Editor Chuck N. Tow, Chief Chartist

Published by
THE CONFERENCE BOARD, INC.
845 Third Avenue, New York, N.Y. 10022 Avenue Louise, 207 Bte 5 B-1050 Brussels, Belgium

12/82 R4105-5.45

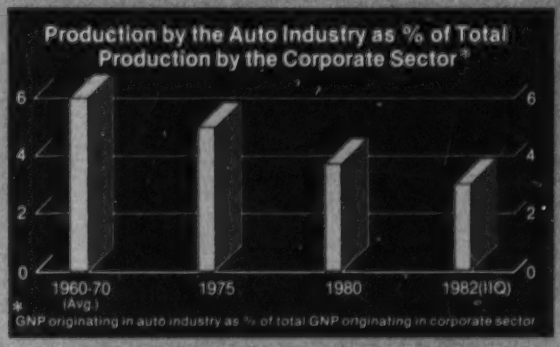
The Conference Board

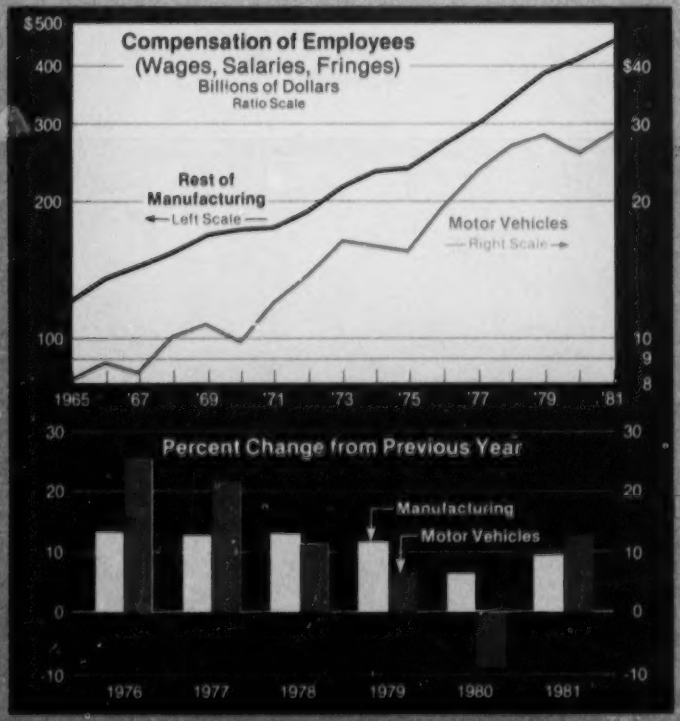
The Automobile Industry in Transition

Economic Road Maps
No. 1938 - 1939

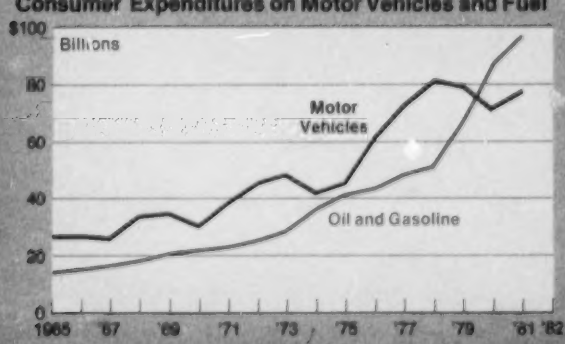
November, 1982

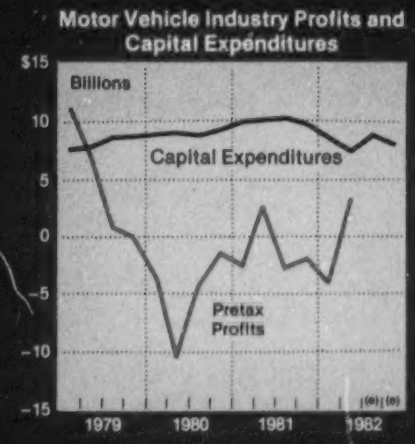
Over 70% of the more than 37 million motor vehicles produced annually around the world come from just five countries—the United States, Japan, Germany, France and Italy. In each case, the auto industry represents an important segment of the country's manufacturing sector. In recent years, the fight against inflation waged by most of these countries has led to restrictive policies and high interest rates that have dampened consumer demand—especially for big-ticket durable goods like cars. Moreover, the oil embargo of 1973-1974 and the Iranian crisis of 1979 led to consumer demand for smaller, more fuel-efficient cars, especially in the United States, where until recently the large car was the standard. Recent years have thus been a period of considerable turmoil and adjustment in the world auto industry.

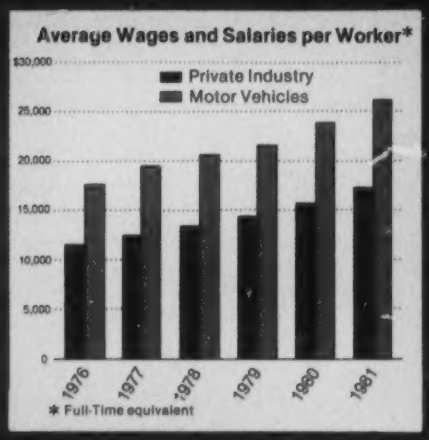


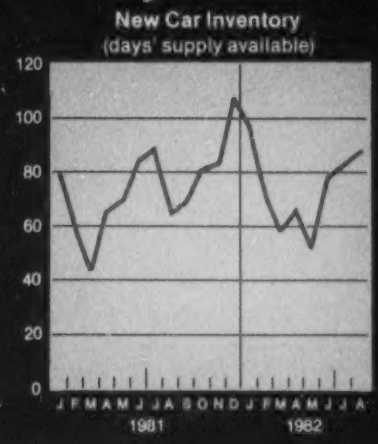


The sudden shift in consumer preference required a massive realignment by the automobile producers (especially in the United States). The U.S. industry undertook to produce a new generation of cars—small, fuel-efficient, and highly engineered, while also featuring improved emission controls and safety standards. The task of raising the necessary capital was particularly hard at a time of high interest rates and declining consumer demand, but the need to proceed with a highly automated production system was pressing. Thus, despite aggregate losses of $5 billion and $1 billion in 1980 and 1981, respectively, the auto makers' capital expenditures ran close to $10 billion annually during this period.



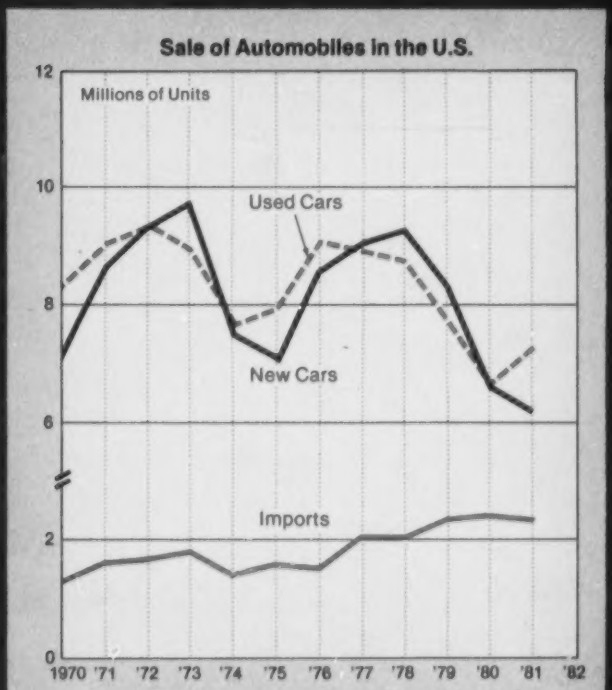


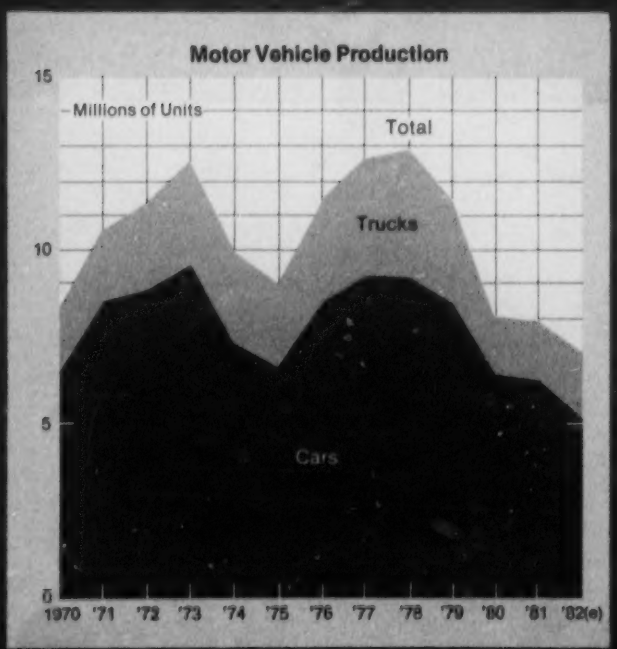


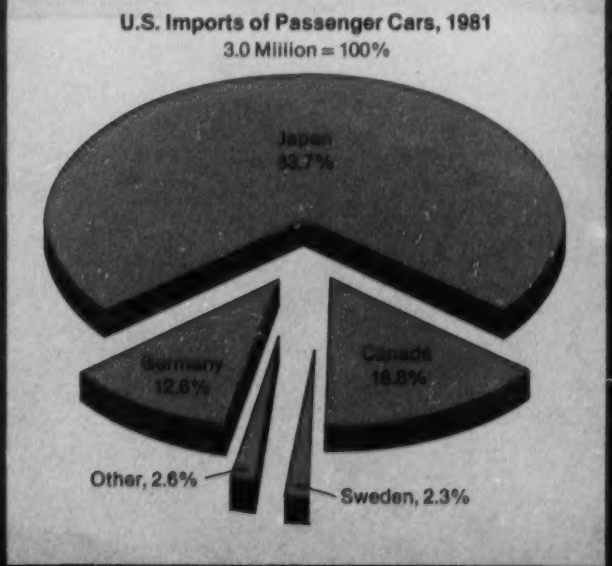


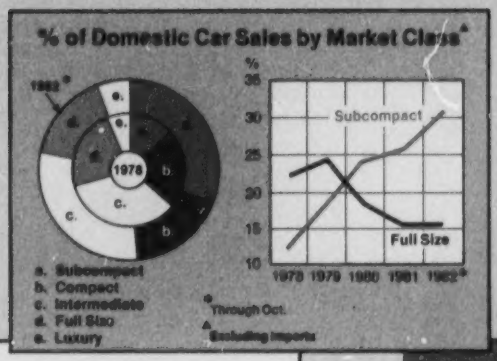
U.S. motor vehicle output peaked in 1978 with 12.9 million cars and trucks produced. In 1981, it was only 7.9 million, the lowest level since 1960; production this year is not expected to top 7 million. In 1960, the United States accounted for half of world production of motor vehicles; by 1981, its share had shrunk to 20 percent. The recession brought a decline in production, which, in turn, severely affected employment in the auto industry: 300,000 jobs were lost between the first quarter of 1979 and the third quarter of 1982. Japan, which produced less than a half million motor vehicles in 1960, has now become the world's largest manufacturer with 11.2 million in 1981—over half of which are exported. The bulk of U.S. exports are to Canada.

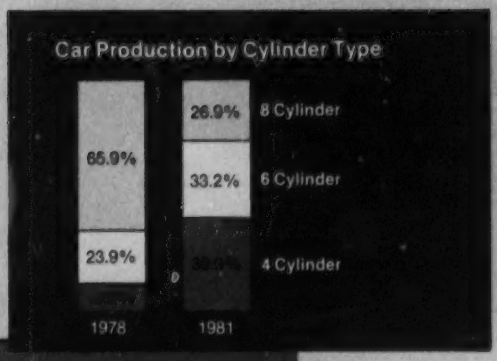
Sales of domestically produced passenger cars have been declining during the past 4 years; some 6.2 million new cars were sold in the United States last year—over 3 million less than in 1978, or a decline of one third. Imports, on the other hand, held up very

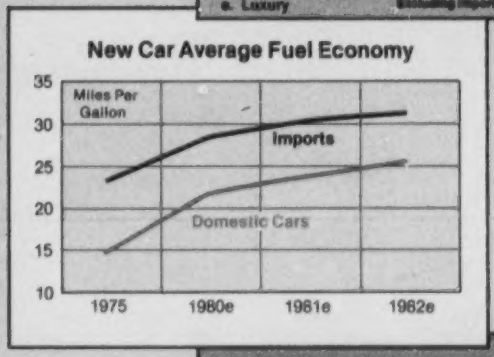


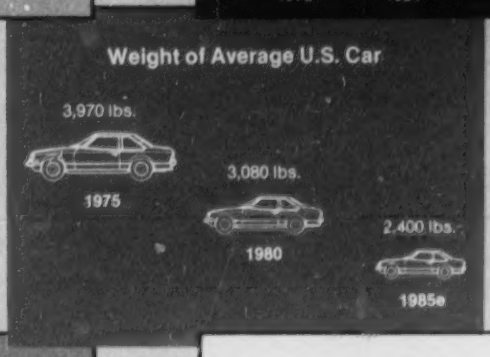


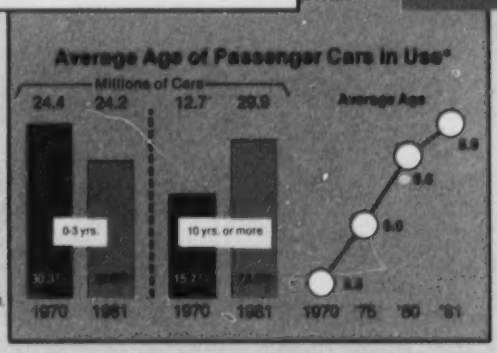


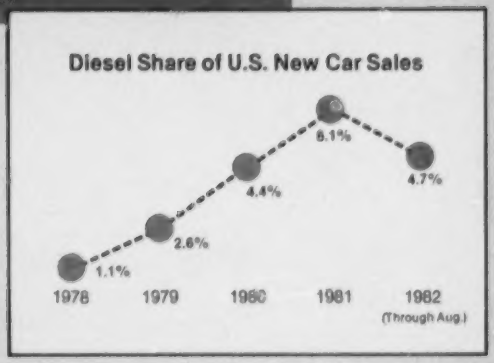




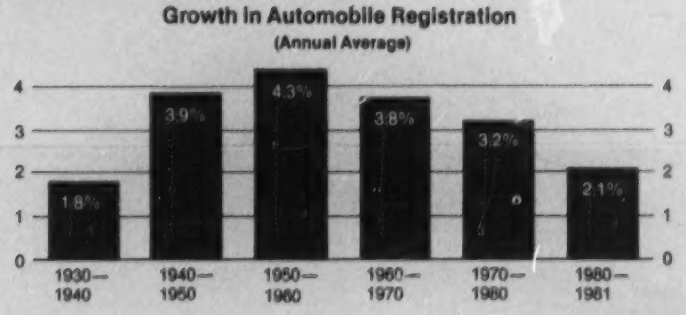


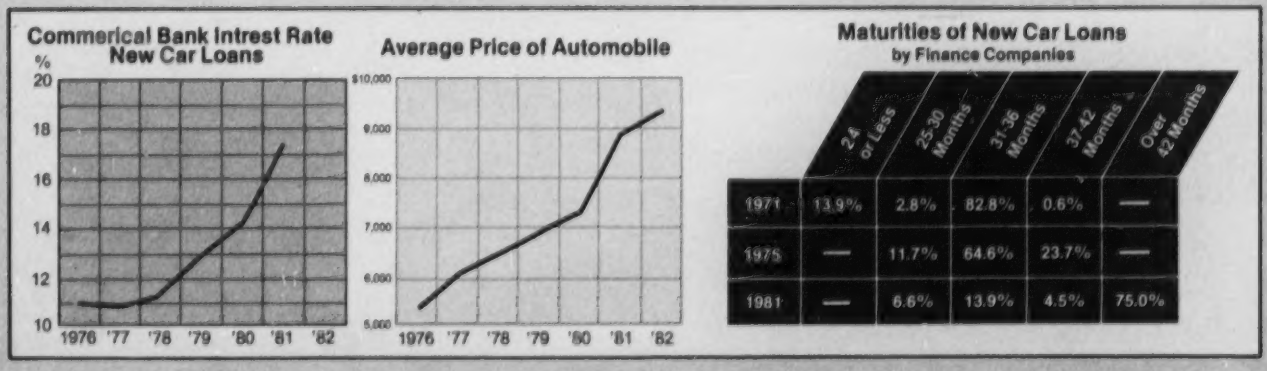


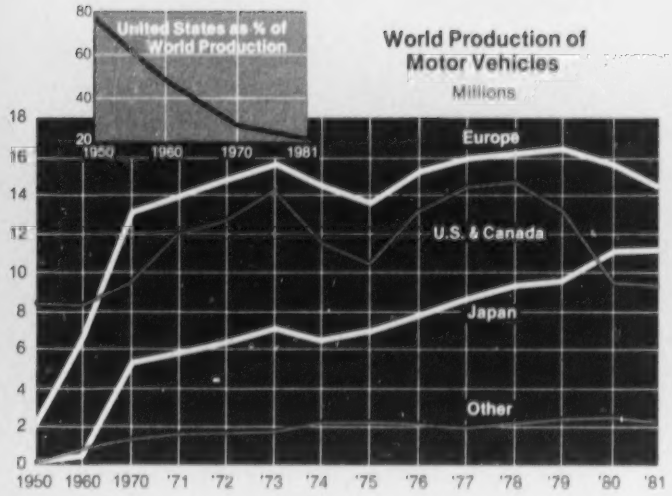


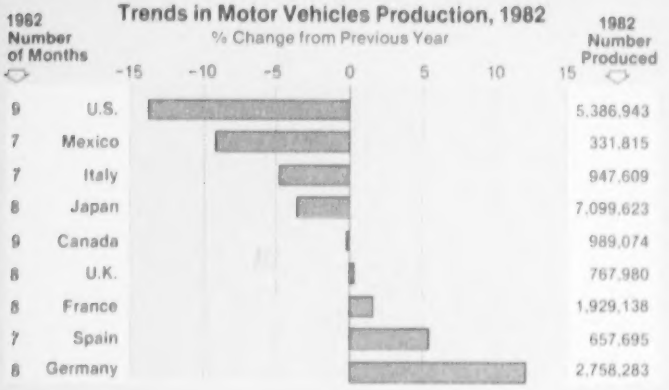


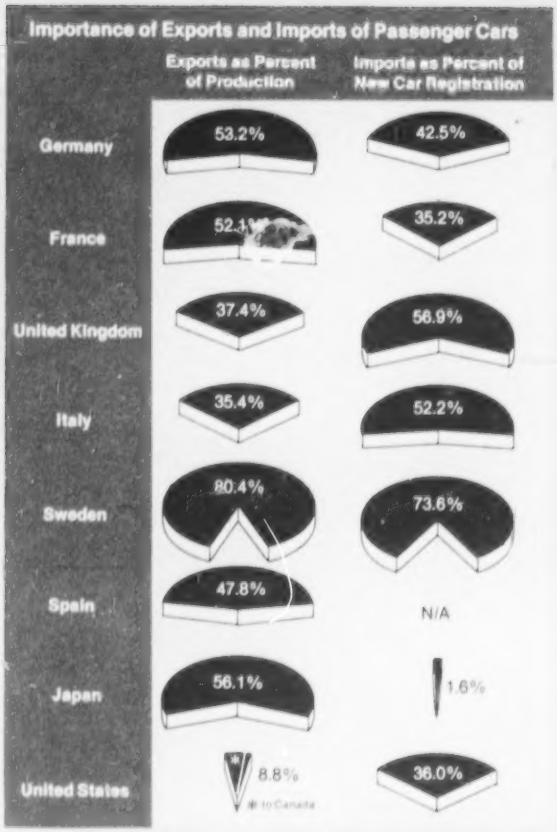
ource: R.L. Polk & Co. Reproductions Prohibited.

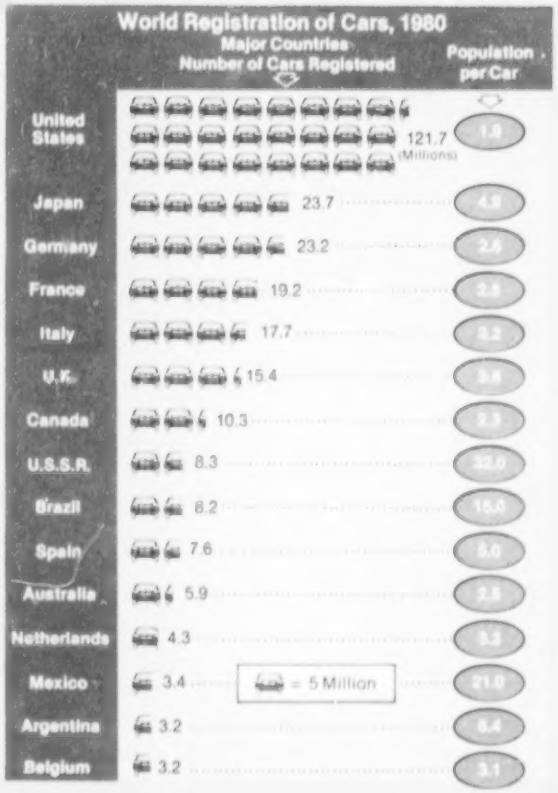









Importance of Exports and Imports of Passenger Cars
Exports as Percent of Production
Imports as Percent of New Car Registration
Germany 53.2% 42.5%
France 52.1% 35.2%
United Kingdom 37.4% 56.9%
Italy 35.4% 52.2%
Sweden 80.4% 73.6%
Spain 47.8% N/A
Japan 56.1% 1.6%
United States 8.8% * to Canada 36.0%



well; 2.3 million new imported cars were sold in the United States in 1981—an increase of 16% from 1978. Of the major foreign suppliers, Germany exported over 370,000 passenger cars to the United States—about the same as in 1965. The big winner has been Japan—from 25,000 in 1965 to 2 million in 1981.

The changing mix of the automobile market is illustrated on page three of this report. There was a dramatic rise in the share of subcompact model cars sold—from 13% in 1978 to 27% last year, and still rising in 1982 to 31 percent. The share of 8-cylinder cars, which dominated the market only four years ago, has declined to 27%, and the fuel economy of domestically produced cars continues to rise, although still outperformed by imports. The rapid aging of cars on the road bodes well for future sales with a potentially large replacement market.

The United States remains the leader in car population, accounting for 38% of the total 321 million cars on the road in 1980. It is also the most mobile society, with two persons per car.

Eva Culen

Sources: U.S. Departments of Commerce and Labor; Motor Vehicle Manufacturers Association; Ward's Communications, Inc.; R. L. Polk & Co.; The Conference Board.

ECONOMIC ROAD MAPS

Eva Culen, Editor Chuck N. Tow, Chief Chartist

Prepared in The Business Conditions Analysis Department—Lora S. Collins, Director
Prices for Quantities of this chart will be supplied on request to Information Service.

Published by
THE CONFERENCE BOARD, INC.
845 Third Avenue, New York, N.Y. 10022 Avenue Louise, 207 Bte 5 B-1050 Brussels, Belgium
THE CONFERENCE BOARD OF CANADA
25 McArthur Road, Ottawa, Ontario K1L-6R3, Canada

R4105-5.4CA

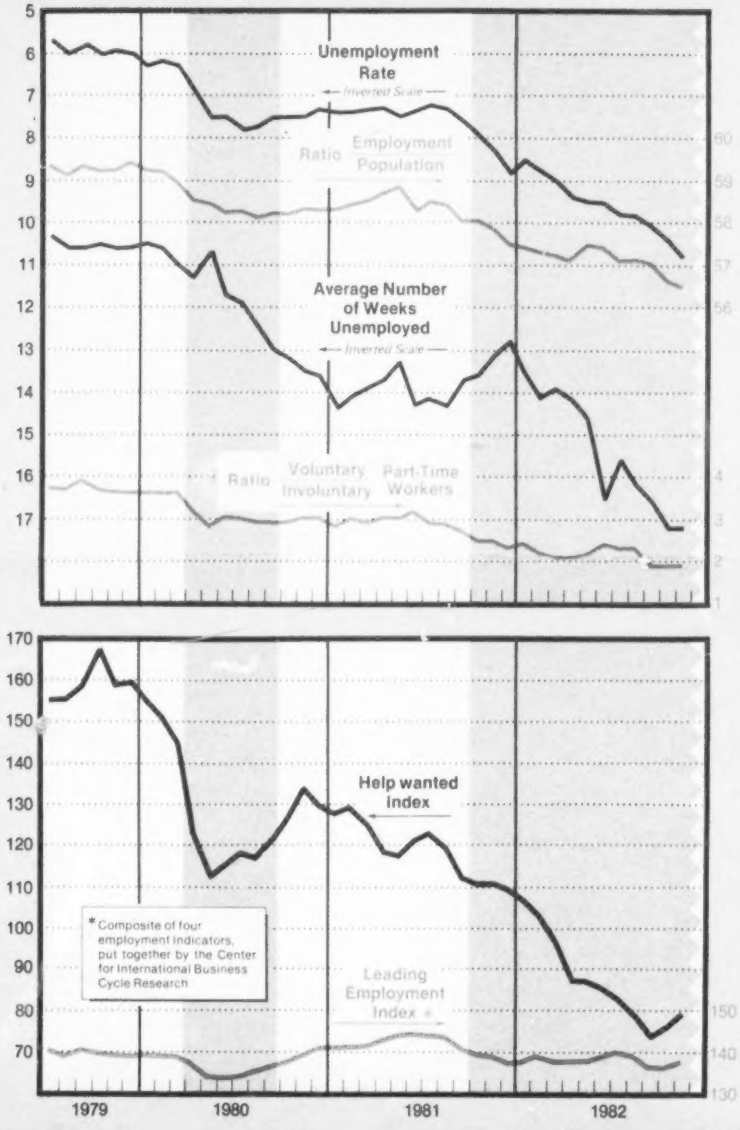
The Conference Board

Unemployment: A Perspective on Recession

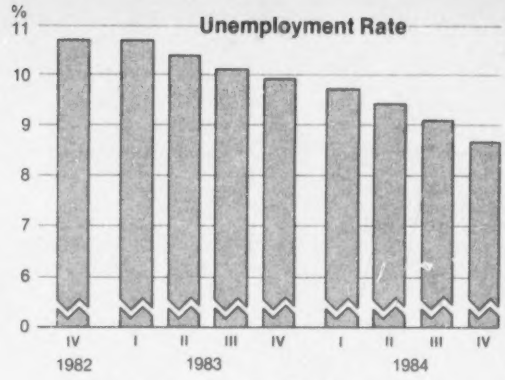
Economic Road Maps
No. 1940-1941
December, 1982

Unemployment is one of the two issues that dominate economic debate; the other is inflation. Most people do not realize, or do not pay enough attention to, the fact that the unemployed are a very varied group. For some, such as those chronically out of work or recent entrants into the labor force, being unemployed may be related more to individual circumstances than to the overall economy. For others, such as the recently laid off, the overriding factor is the state of the economy. Policy proposals aimed at reducing joblessness for one group may do little to improve conditions for others.

Tracking the Labor Market Over the Last Two Recessions



Unemployment Rate

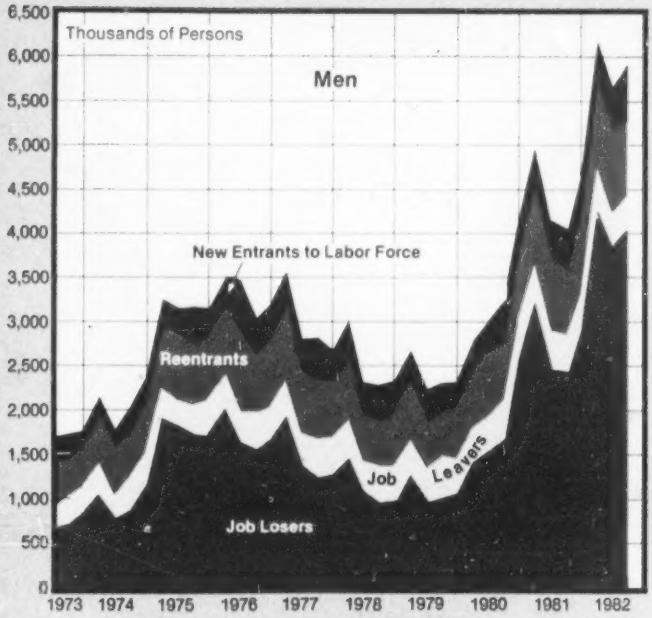


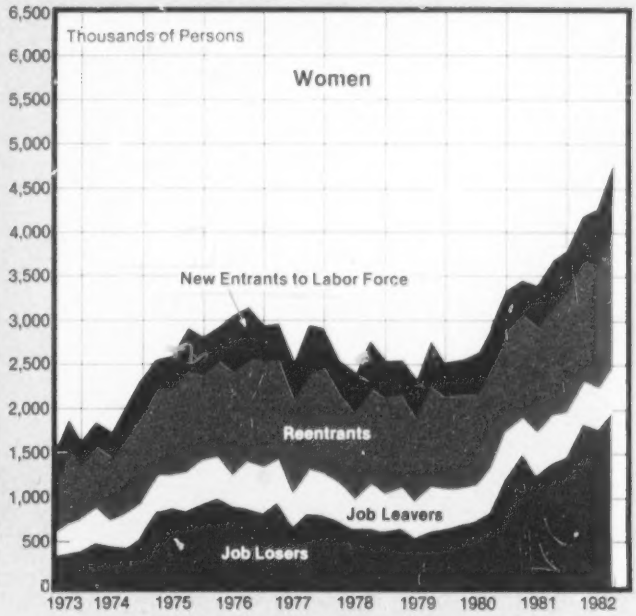
Median of eight forecasts, Conference Board's Statistical Bulletin.

The national unemployment rate was 5.7% in July, 1979, which is taken here as a point of reference before the steep rise in unemployment began. It had reached 10.8% by November, 1982. Although it is anticipated to begin improving in the first half of 1983, it will probably remain very high throughout 1983 and 1984. The consensus forecast suggests that the unemployment rate may fall no lower than 8 1/2 or 9% by the end of 1984. Joblessness, then, not only is currently at a 40-year high, but it will be persistently very high for some time.

The pool of unemployed is a constantly changing group of people. Some leave home or school to look for work while others go back to school, return to home duties, retire or become too ill or discouraged to continue their job search. A difference between the number starting their search and the number discontinuing can result in a change in the unemployment rate that is not directly related to changes in economic activity. Moreover, only a portion of all job seekers are unemployed: Quite a few people may be looking for

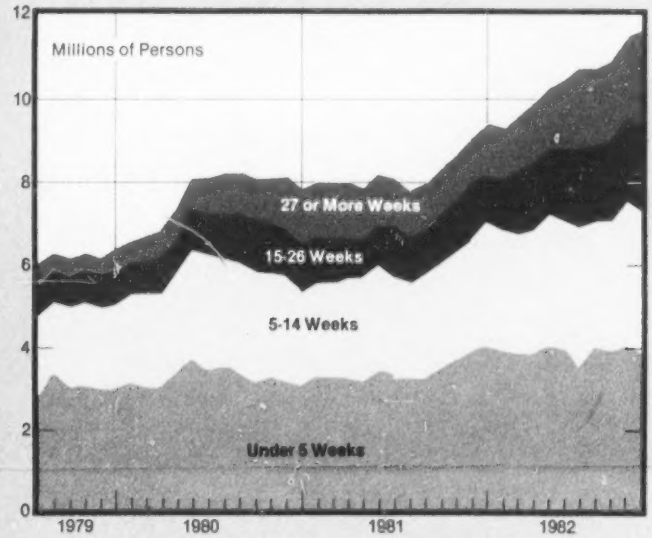
Unemployed Job Seekers by Reason for Unemployment





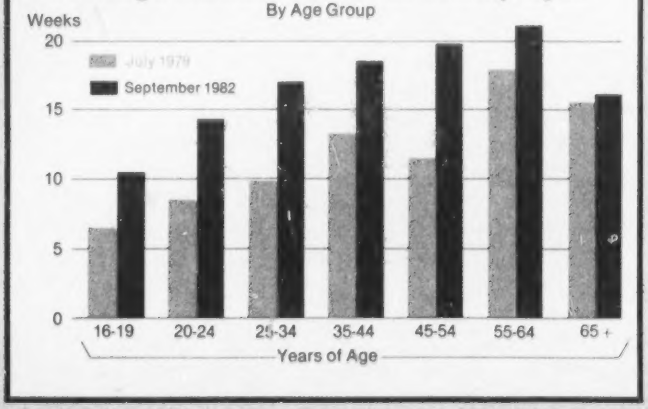
Unemployment by Duration

Number of Weeks Unemployed



Average Number of Weeks Unemployed

By Age Group

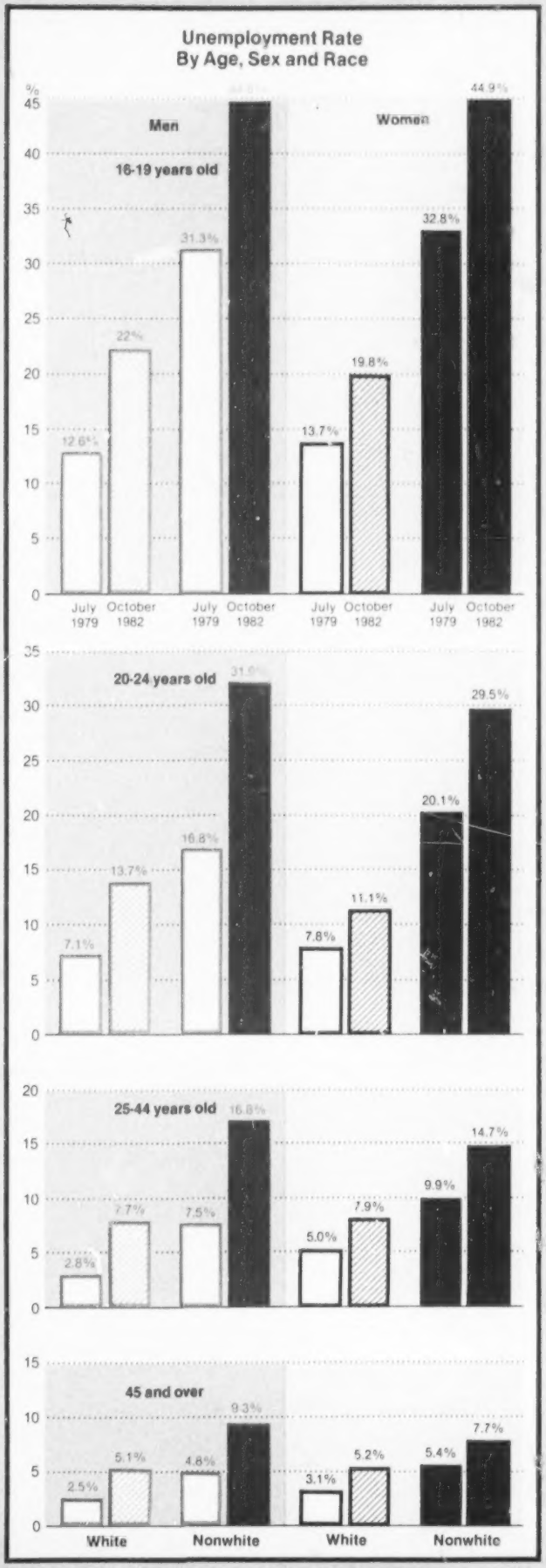


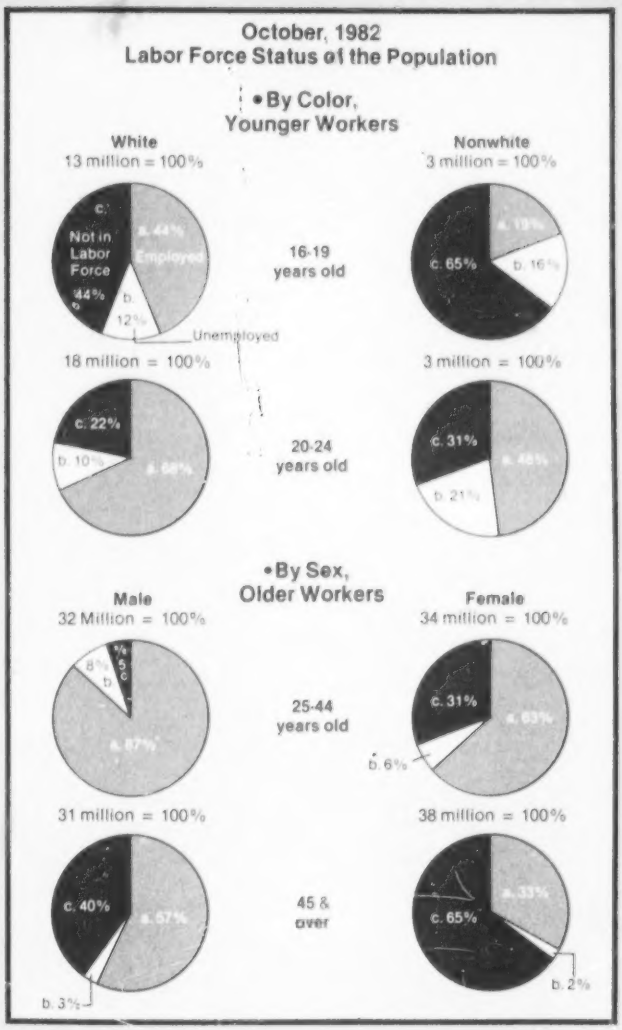
a new job while still working at the old one. On the other hand, surveys show that about one worker in four is working at a job found within the previous 12 months. The classification of the population into employed, unemployed and not in the labor force is convenient, but it is important to note that people can and do move between these categories frequently and for reasons not directly related to the state of the economy.

In general, younger people are out of work more often than older people but for shorter periods of time; the young are thus more likely to be looking for work than older workers. Their problem is not so much finding work but finding a job to their satisfaction. Older people tend to be unemployed less frequently. But when thay are out of work, they spend a longer period looking for a new job.

Unemployment rates for male teenagers tend to be similar to rates for female teenagers. The same is true, but to a lesser extent, for men and women 45 or older. But in the age groups 20 to 44, men have considerably lower unemployment rates than do women. The biggest single category of unemployed men is those who have lost jobs either for personal or business reasons. Among women, the largest category is reentrants to the labor force—that is, people who worked, left the labor force (most commonly to tend to home responsibilities), and have begun a new job search. The tendency of women to move in and out of the labor force more frequently than men results in a somewhat higher unemployment rate for women in general.

Unemployment rates are lower for whites than for nonwhites in all age groups. When the overall rate was 5.7% in July, 1979, the rate was 12.6% for white male teenagers but 31.3% for nonwhite male teenagers. In fact, high job turnover and frequent spells of joblessness continue into the adult working life of many nonwhites. The unemployment rate for white males



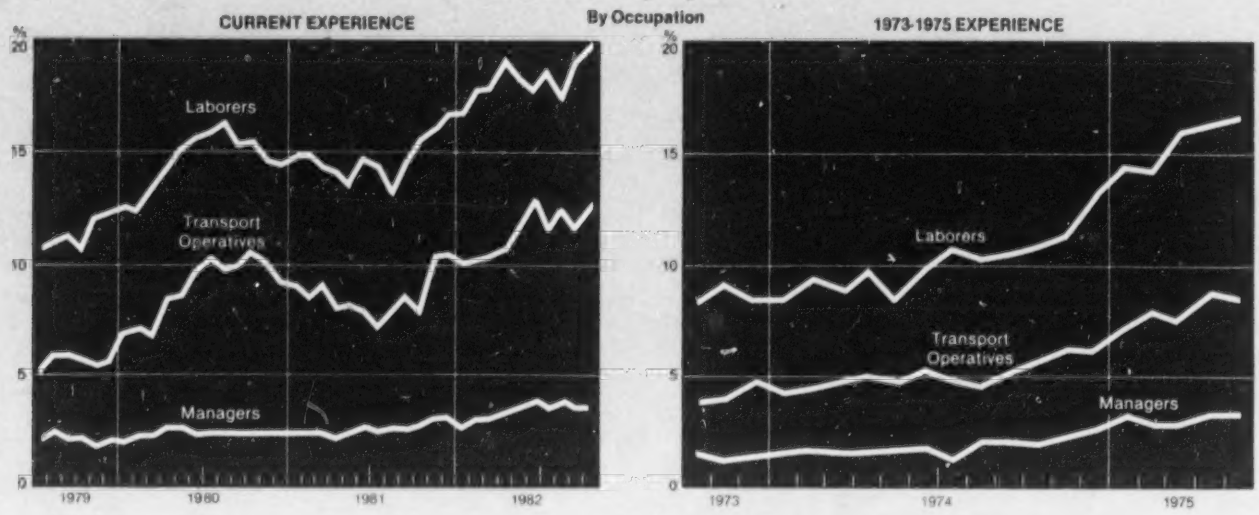


aged 20 to 24, was 7.1% in July, 1979, but it was 16.8% for nonwhite males of the same age.

According to the monthly Bureau of Labor Statistics surveys, the average number of people working in a given month in 1982 was 99 million, while 11 million were unemployed; the average labor force was thus 110 million. On average, 62 million people of working age (16 and over) were not working or actively jobseeking, and thus not counted in the labor force. However, some people were employed at one time during the year and unemployed or even out of the labor force at some other time in the year. Hence, while an average of 110 million were in the labor force at any given time, a total of about 121 million participated at *some time* during the year. Likewise, while the average number of unemployed was 11 million, a total of 27 or 28 million experienced *some* unemployment in 1982.

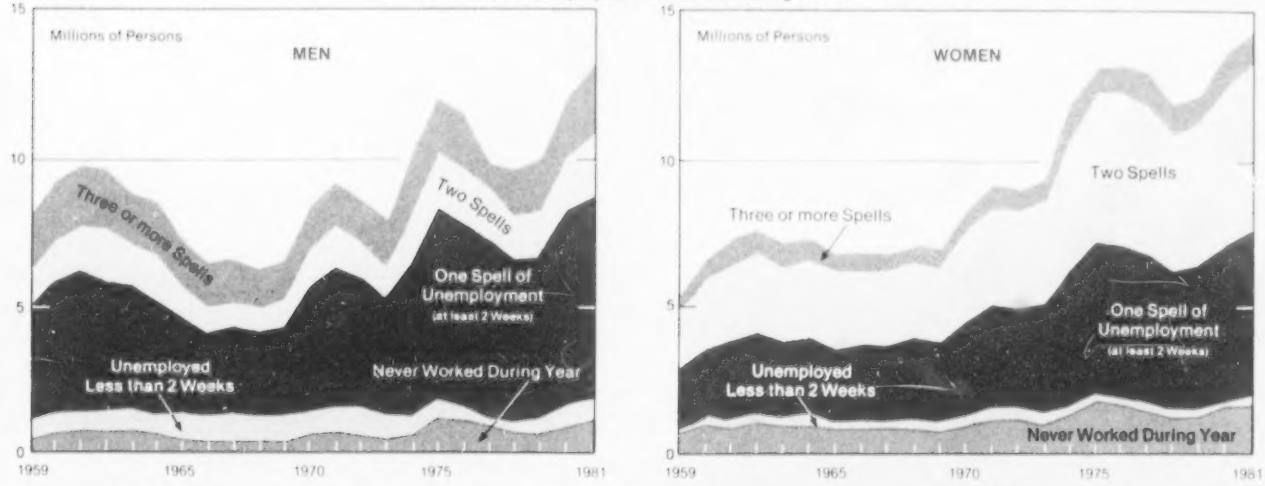
There were a little more than 6 million people out of work in July, 1979: About 1.8 million were teenagers; 1.4 million were 20 to 24 years old; 2 million were 25 to 44; and not quite a million were 45 or older. The number of unemployed in October, 1982, was 4.7 million greater than in July, 1979. Teenagers accounted for very little of that increase. Just about one million of the increase was in the 20 to 24 year group; 2.8 million were in the 25 to 44 year

Selected Unemployment Rates



The Extent of Unemployment

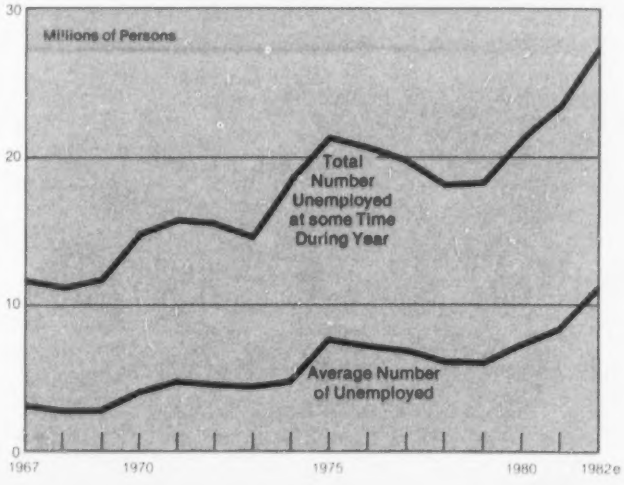
All Persons Unemployed at Some Time During the Year



group; and about 800,000 were 45 or older. Both in absolute and percentage terms, adult white men have been most affected by the 1979-1982 slowdown of the economy—in fact, a higher proportion of men than women are out of work at the moment in contrast to the general pattern in which the women's rate is higher. This last point is consistent with the very severe increases in unemployment rates for predominantly male occupations such as laborers and transport operatives (truck drivers, etc.). In fact, unemployment rates in those categories not only are the highest among all occupational groups but are substantially higher in this latest downturn than in the very severe 1974-1975 recession.

Ken Goldstein

Sources: Bureau of Labor Statistics; The Conference Board.



ECONOMIC ROAD MAPS

Eva Cohen, Editor Chuck N. Tow, Chief Chartist

Prepared in The Business Conditions Analysis Department—Lora S. Collins, Director
Prices for Quantities of this chart will be supplied on request to Information Service.

Published by
THE CONFERENCE BOARD, INC.
845 Third Avenue, New York, N.Y. 10022 Avenue Louise, 207 Bte 5 B-1050 Brussels, Belgium
THE CONFERENCE BOARD OF CANADA
25 McArthur Road, Ottawa, Ontario K1L-6R3, Canada

R4105-5.48A

THE CONFERENCE BOARD

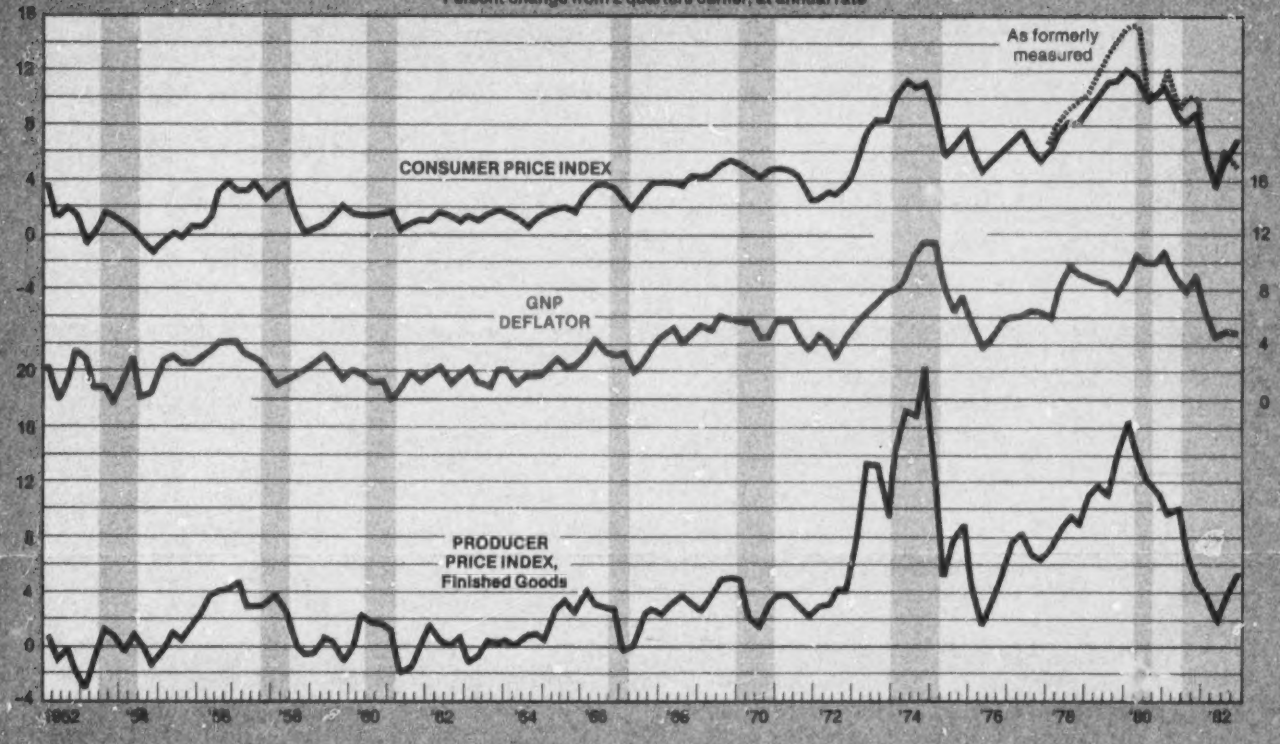
The Inflation Situation

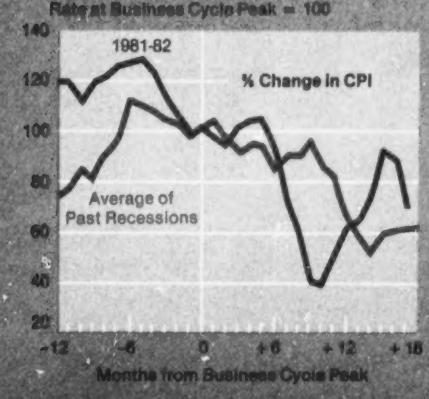
Economic Road Maps
No. 1944
February, 1983

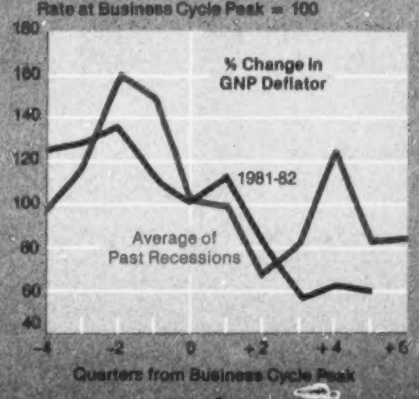
Inflation is a broadly diffused increase in the price level. One key inflation measure is the GNP price deflator, which reflects the price behavior of the entire spectrum of goods and services turned out by the economy. Its rise slowed from an annual rate of about 10% in late 1980 and early 1981 to under 5% in the past three quarters. The consumer price index (CPI), which measures the price behavior of a fixed "basket" of consumer goods and services, was rising at 12% annually in early 1980 and at somewhat over 5% in recent quarters. As of 1983, the CPI is measuring homeownership cost by estimating the owners' shelter cost—that is, what they would pay if they were renting. Formerly, the CPI measured the capital cost of buying a house, and escalating home prices and interest rates gave the measure an upward bias. The historical CPI data charted here are on the new basis, but the path of the CPI as it was actually published during the past five years is also shown.

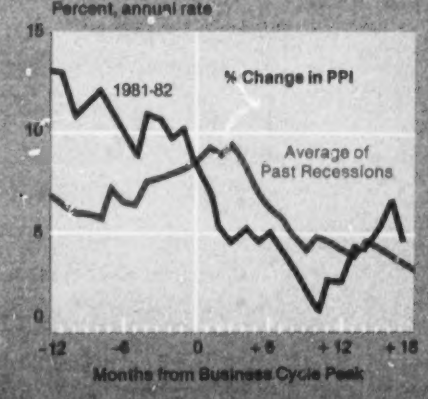
Three Measures of Inflation

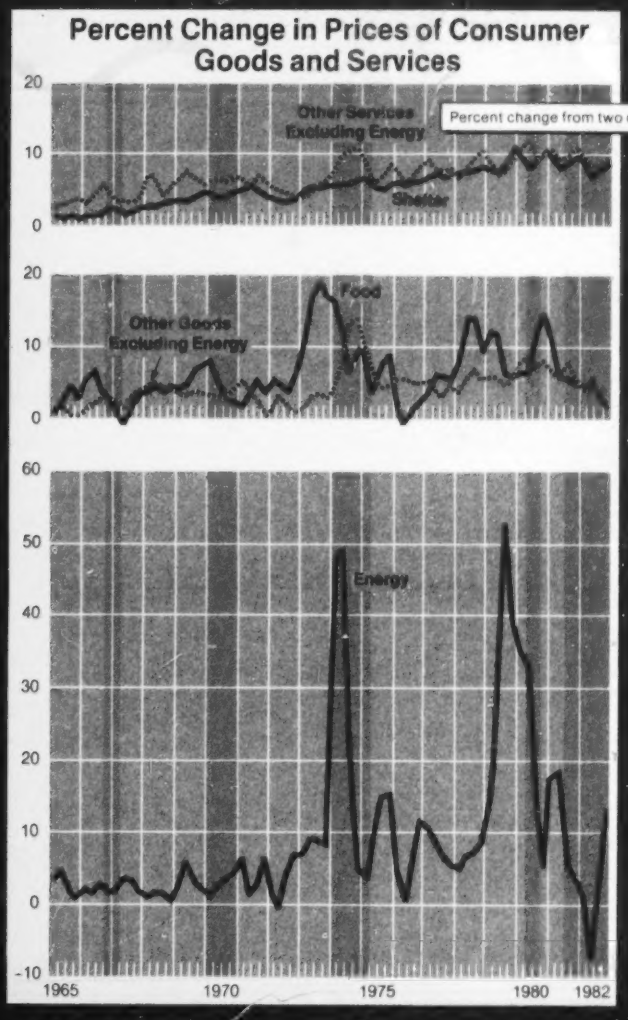
Percent change from 2 quarters earlier, at annual rate

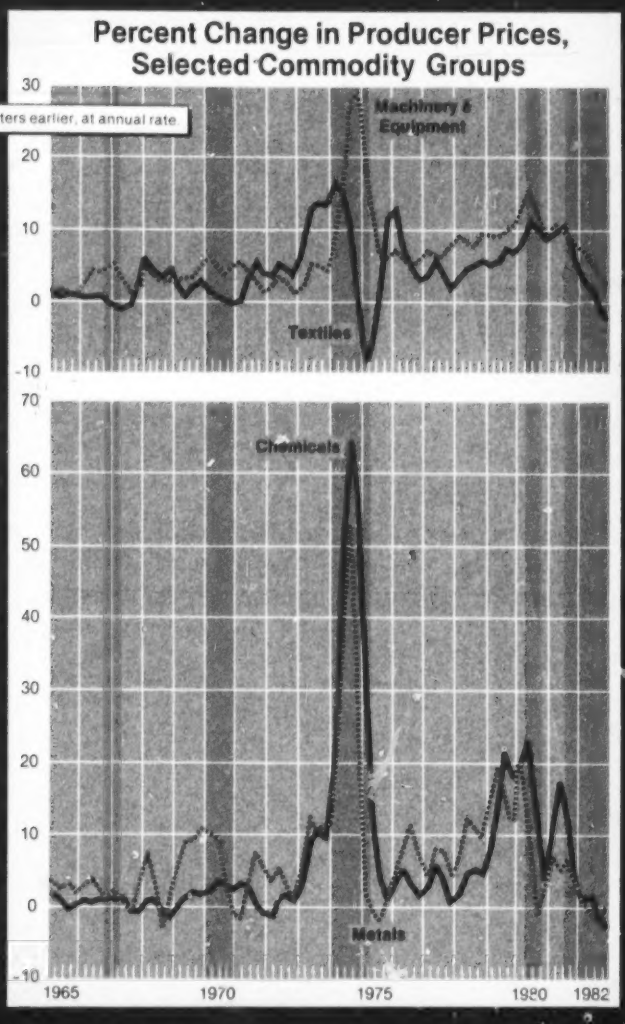





Rate at Business Cycle Peak = 100
% Change in GNP Deflator
1981-82
Average of Past Recessions
Quarters from Business Cycle Peak



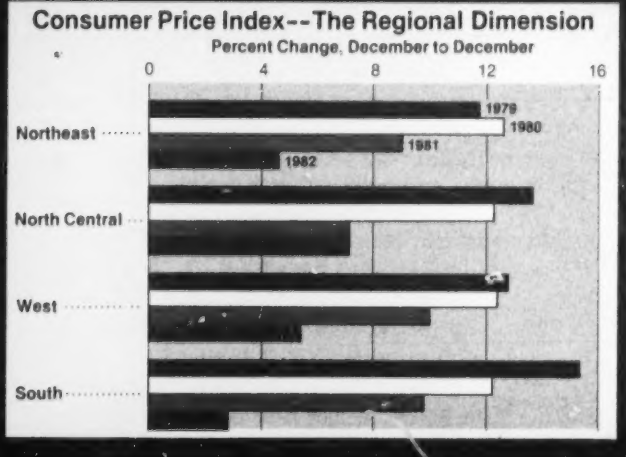


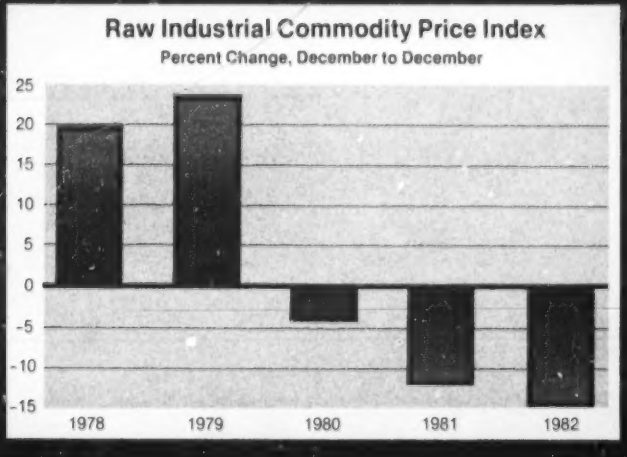


While the past year has seen moderation in the price advance for most major consumer spending categories, the deceleration has been sharper for goods than for services. This reflects the fact that production and demand in goods markets are usually more sensitive to the business cycle than are production of, and demand for, services. By far, the most volatile markets are those for industrial commodities.

Lora S. Collins

Sources: Bureau of Economic Analysis; Bureau of Labor Statistics; The Conference Board.





ECONOMIC ROAD MAPS

Eva Culen, Editor Chuck N. Tow, Chief Chartist

Prepared in The Business Conditions Analysis Department—Lora S. Collins, Director
Prices for Quantities of this chart will be supplied on request to Information Service.

Published by
THE CONFERENCE BOARD, INC.
845 Third Avenue, New York, N.Y. 10022 Avenue Louise, 207 Bte 5 B-1050 Brussels, Belgium
THE CONFERENCE BOARD OF CANADA
25 MacArthur Road, Ottawa, Ontario K1L-6R3, Canada

THE CONFERENCE BOARD

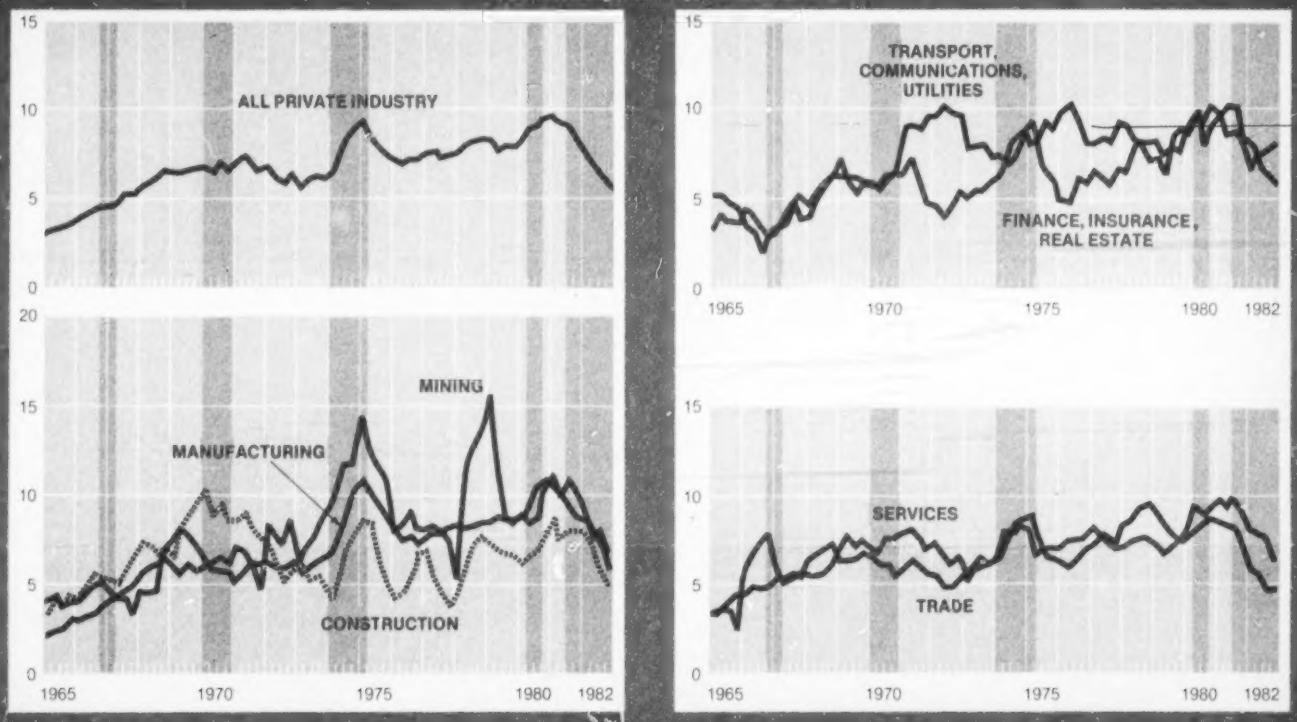
Labor Costs

Economic Road Maps
No. 1945 February, 1983

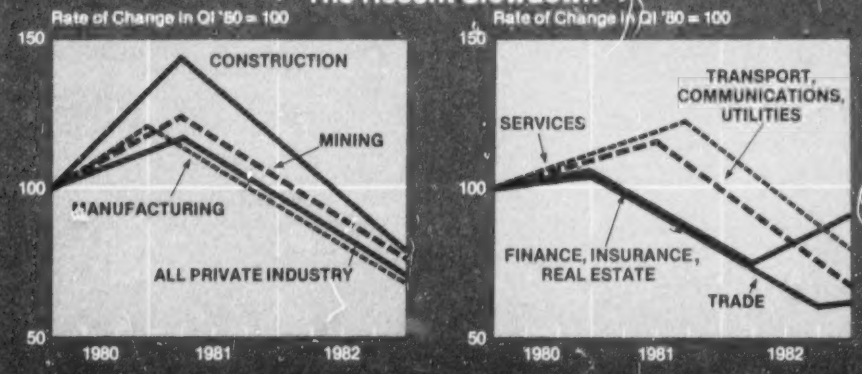
The economic slump of the past three years has had a sharp impact on wage behavior. The average hourly wage rate in private industry was rising at 10% a year in late 1980, but at barely over 5% in late 1982. This measure is standardized so that it is not influenced by changes in the composition of the work force; thus, the observed slowdown cannot be attributed simply to the fact that job losses have been most severe in relatively high-paying durable goods industries. As the charts below show, wage advances have decelerated throughout industry. The two panels at the bottom of the page relate the rate of wage change during the past three years to the rate in the first quarter of 1980—which was, in effect, the peak preceding the three-year economic slump.

Wage Trends: Percent Change in Average Hourly Wage Rate

Percent change from 4 quarters earlier



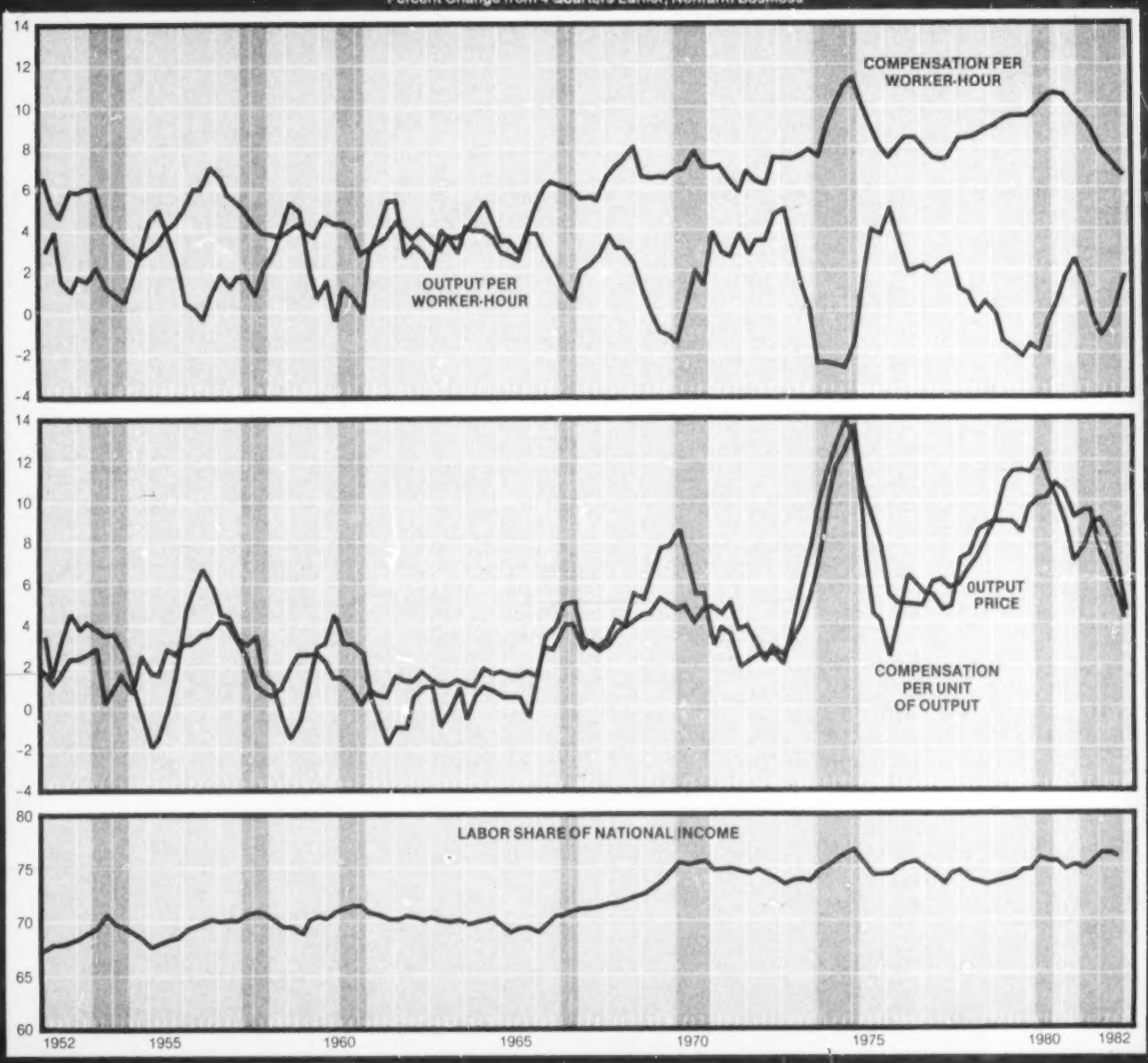
The Recent Slowdown



The key to the basic trend of prices is the trend of labor cost, because it comprises the bulk of the total cost of the "factors of production" that produce the national output. If hourly compensation (wages, salaries, fringes) rises faster than hourly output, compensation per unit of output rises. The result is a rise in the price level. The only way to avoid the price rise is for profit margins to shrink, allowing the higher per unit

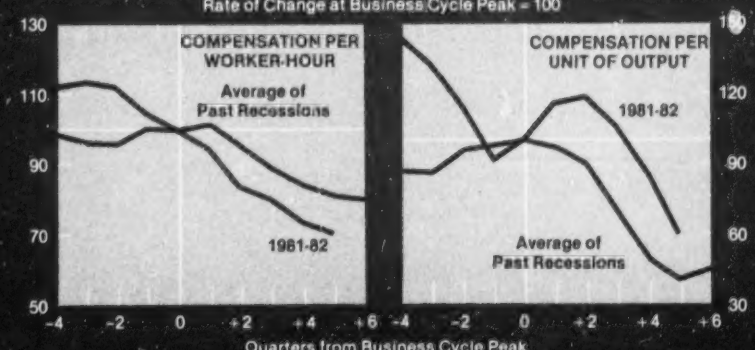
Labor Cost and Inflation

Percent Change from 4 Quarters Earlier, Nonfarm Business



Compensation and the Business Cycle

Rate of Change at Business Cycle Peak = 100



labor cost to increase the labor share of national output. In 1983, decelerating wage gains and improving productivity could make for good news about unit labor cost and prices.

Lora S. Collins

Sources: Bureau of Economic Analysis; Bureau of Labor Statistics; The Conference Board.

ECONOMIC ROAD MAPS

Eva Culen, Editor — Chuck N. Tow, Chief Chartist

Prepared in The Business Conditions Analysis Department—Lora S. Collins, Director

Prices for Quantities of this chart will be supplied on request to Information Service.

Published by

THE CONFERENCE BOARD, INC.

845 Third Avenue, New York, N.Y. 10022 Avenue Louise, 207 Bte 5 B-1050 Brussels, Belgium

THE CONFERENCE BOARD OF CANADA

25 McArthur Road, Ottawa, Ontario K1L-6R3, Canada

2/22/83 R7105-5.47#

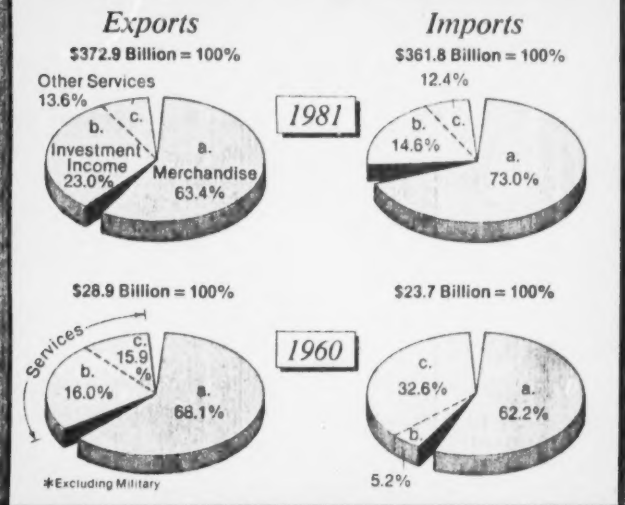
The Conference Board

Trends in United States Foreign Trade

Economic Road Maps
Nos. 1942—1943 January, 1983

World trade, fueled by expanding economies and general prosperity and helped along by substantial reductions in world tariffs, has grown at exceedingly high rates during the past three decades. But this growth has come to a sudden halt in the face of the worst global recession in decades, coupled with record unemployment in most of the developed world. For the first time in over 20 years, the dollar volume of world exports declined in 1981 by 2%, and will evidently fall substantially more in 1982.

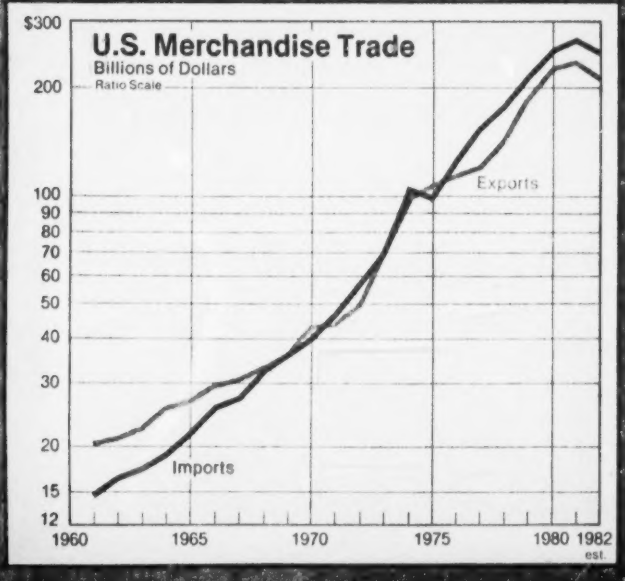
U.S. Trade in Goods and Services*



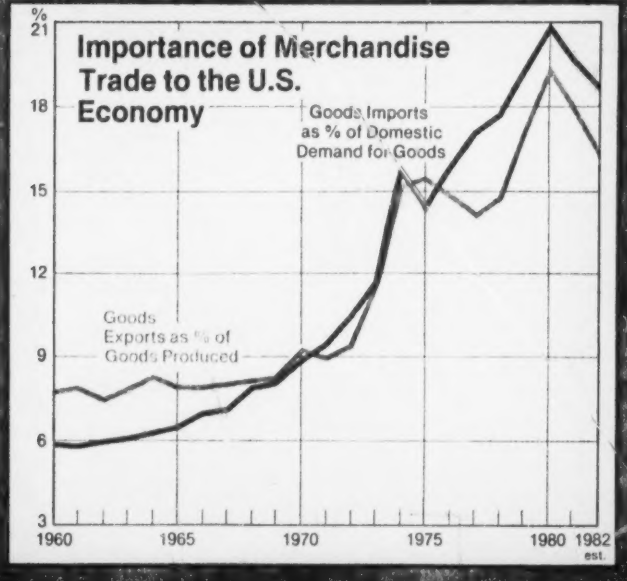
U.S. Share of World Merchandise Trade

Compared with the situation in some industrialized countries, the importance of exports to the U.S. economy is small. However, that importance has risen substantially. Only ten years ago, 6% of total U.S. production of goods and services—the GNP—went to export markets; since then the figure has more than doubled to 12½% in 1981. At the same time, however, the U.S. role in world trade shrank: Of some $1.8 trillion in worldwide exports in 1981, the United States accounted for 12%, compared with

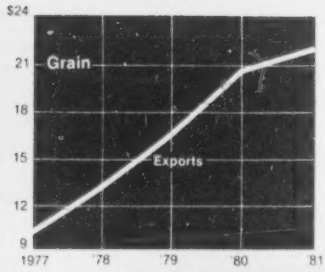
U.S. Merchandise Trade

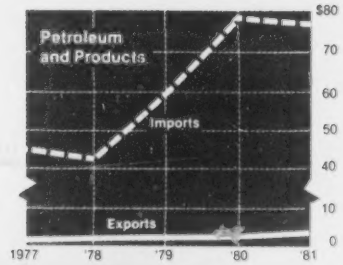


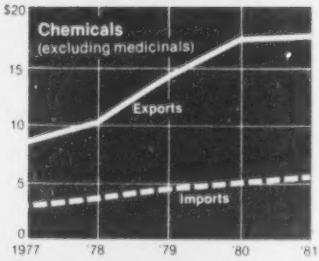
Importance of Merchandise Trade to the U.S. Economy

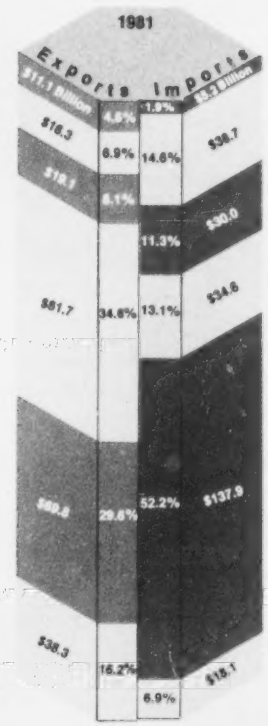


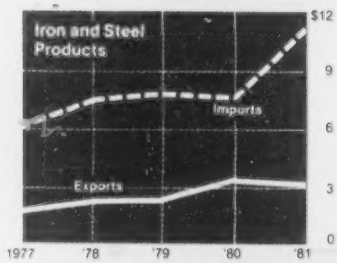
U.S. Exports and Imports, 1981
Major Product Groups

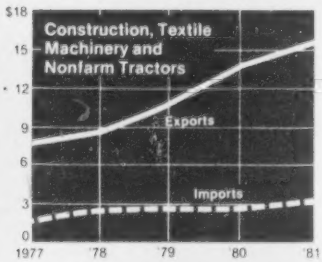


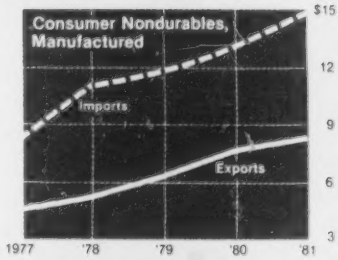


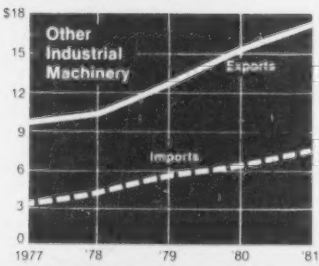


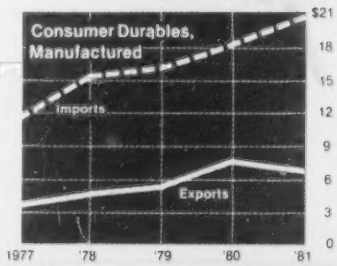




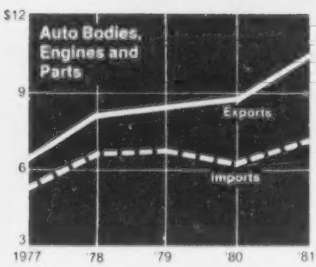


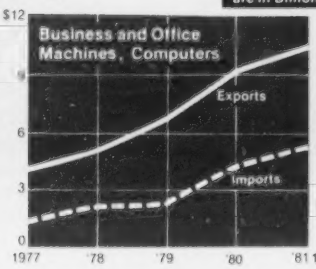


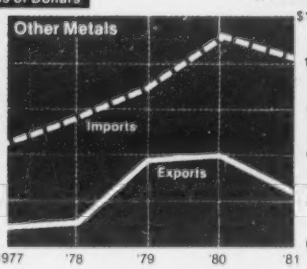


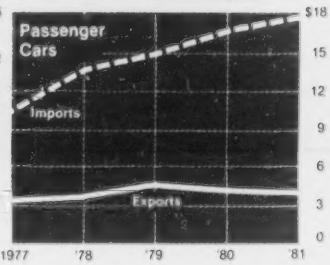


All Exports and Imports are in Billions of Dollars

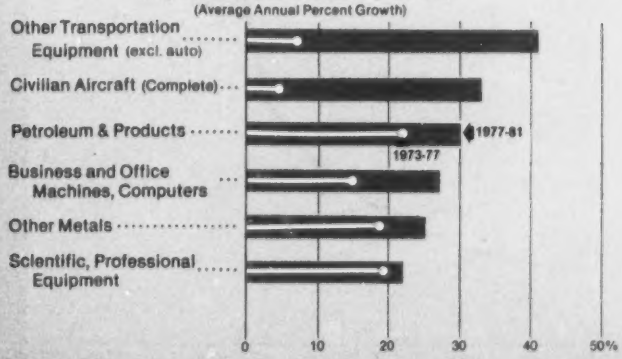




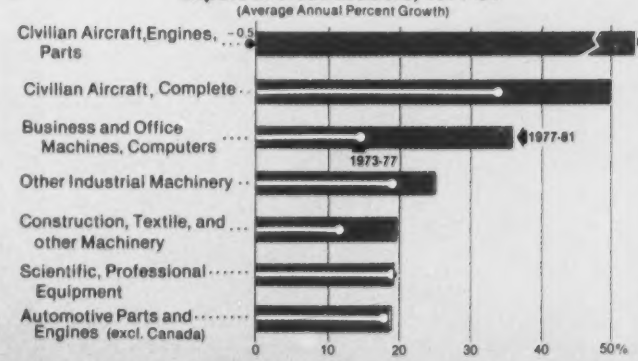


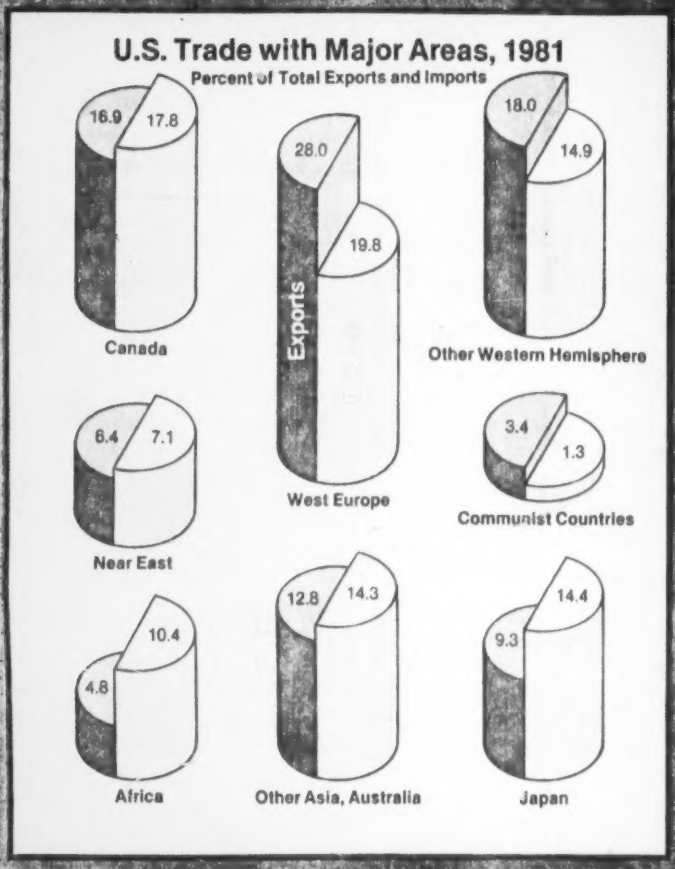


Export Growth Leaders, 1977-81
(Average Annual Percent Growth)



Import Growth Leaders, 1977-81
(Average Annual Percent Growth)





18% in 1960. Nevertheless, the United States remains the largest trading nation.

U.S. merchandise exports exceeded imports throughout the postwar era until 1970; since then, imports have outrun exports in most years. Merchandise exports were $236 billion in 1981, up 5% over the preceding year—but will decline about 9% in 1982. Imports, on the other hand, continued strong. Their share in U.S. domestic demand for goods was at record levels during the past two years. This was mainly due to attractive import prices resulting from the appreciation of the dollar. The strength of the dollar also made it harder for Americans to export at competitive prices, and raised other countries' bills for oil and other dollar-denominated commodities, leaving them with fewer dollars to spend on imports from the United States.

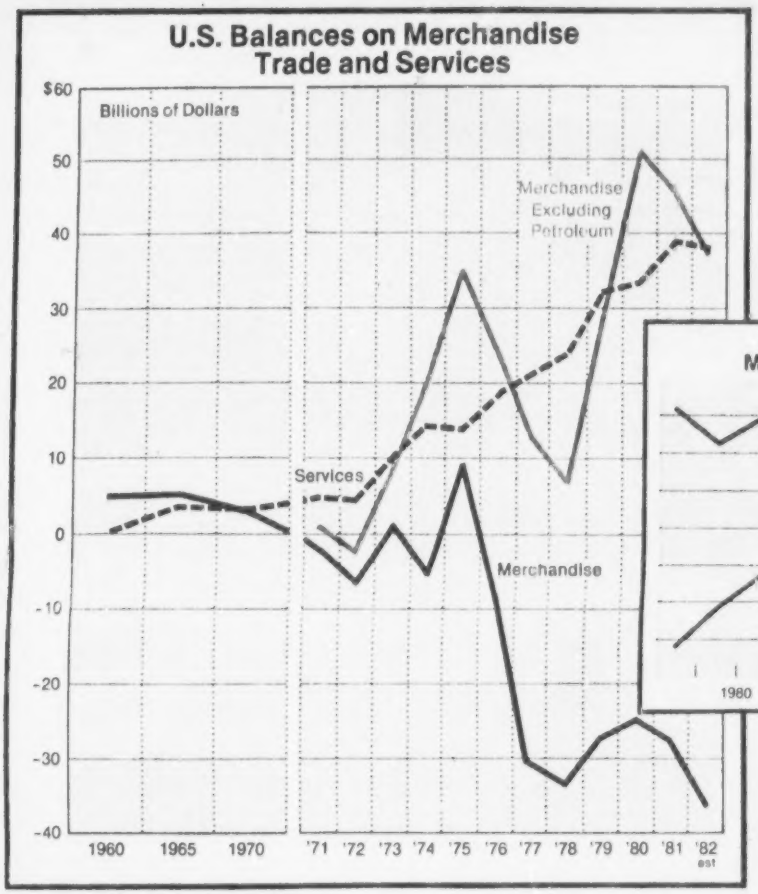
While merchandise accounts for the larger part of total U.S. exports, it is the exports service sector that is expanding faster. Service exports increased at an annual rate of 16% to $137 billion in 1981, while service imports also rose 16% to $98 billion. The surplus of $39 billion on these transactions more than offset the deficit of $28 billion on merchandise transactions. But the deepening merchandise trade deficit is shifting the current account balance from a surplus of $4.5 billion in 1981 to a deficit estimated at $4 to $5 billion in 1982.

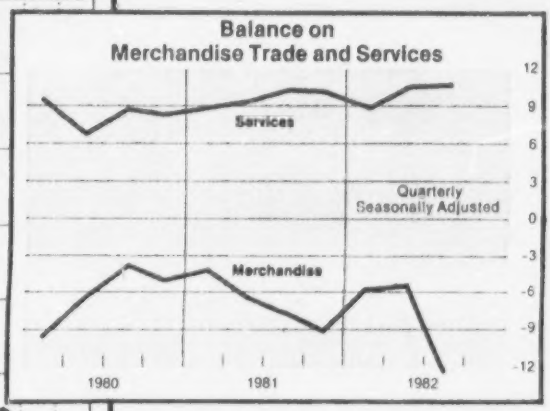
U.S. Exports by Major Markets and Product Groups, 1981

Percent of Column Totals

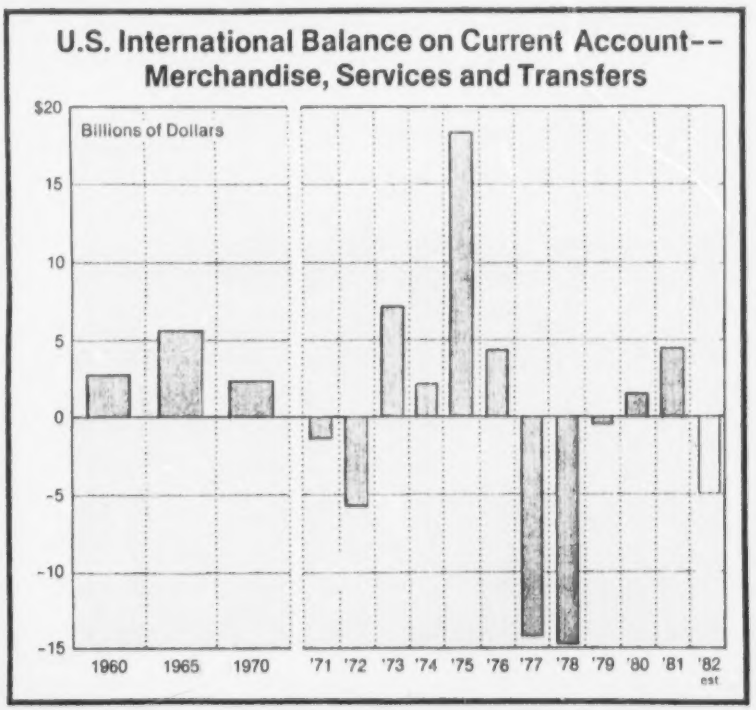
	Food	Beverages and Tobacco	Crude Materials Exc. Fuels	Fuels	Chemicals	Machinery	Motor Vehicles	Other Transportation Equipment	Other Manufactured Products	Metals, Textiles	Oil and Fats	All Other	Agricultural	Nonagricultural	Total Exports
Canada	5.4	1.7	8.7	18.5	11.7	17.8	52.3	6.6	17.1	21.7	1.5	21.9	**4.6**	**19.6**	**16.9**
Other Western Hemisphere	17.1	6.9	8.0	8.1	22.8	20.7	20.5	13.9	19.4	25.5	28.9	10.1	**14.7**	**18.8**	**18.0**
West Europe	21.5	30.8	38.9	10.3	29.5	27.1	8.4	31.4	24.6	20.8	18.5	31.4	**26.0**	**27.8**	**28.0**
Africa	7.9	7.6	1.5	2.1	3.0	5.5	3.3	5.4	3.4	4.7	18.0	1.3	**6.5**	**4.4**	**4.7**
Near East	4.5	16.4	1.2	1.5	2.4	7.7	8.3	8.8	6.1	7.7	2.9	1.4	**3.6**	**7.0**	**6.4**
Japan	15.6	13.4	21.0	20.4	11.1	4.6	1.1	8.2	8.2	6.8	5.2	1.3	**15.1**	**8.1**	**9.3**
Other Asia, Australia	11.3	17.2	14.1	8.2	15.9	15.8	4.4	15.0	11.1	10.3	20.6	3.7	**13.3**	**12.8**	**12.8**
Communist Countries	14.2	1.0	6.4	1.1	3.6	0.8	0.8	0.2	0.9	2.5	5.3	0.2	**11.9**	**1.5**	**3.4**
Unidentified	2.5	0	1.1	0	0	0	0.9	10.5	0.2	0	0	25.7	**2.3**	**0**	**0.5**
Total %	100	100	100	100	100	100	100	100	100	100	100	100	**100**	**100**	**100**
Total: $ Billions	**30.3**	**2.9**	**21.0**	**10.3**	**21.2**	**62.9**	**16.2**	**16.3**	**20.6**	**16.7**	**1.8**	**8.4**	**43.3**	**185.6**	**233.7***

* Includes foreign merchandise re-exported



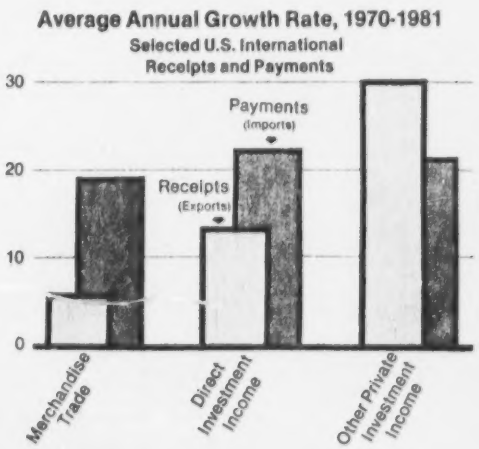


Service receipts exports fall into two broad categories. One is miscellaneous transactions such as travel, passenger fares, transportation, royalties and fees, and military services. The other consists of income on investments—direct investments in business ownership aboad, other private investments in securities and loans, and government investments in securities. Receipts of income on "other private investments" totaled over $50 billion in 1981, compared with $2.7 billion in 1970. The average annual rate of increase was 30%, and these receipts accounted for almost 60% of total investment receipts in 1981, compared with 23% in 1970.



Eva Culen

Sources: U.S. Department of Commerce; International Monetary Fund; The Conference Board.



ECONOMIC ROAD MAPS

Eva Culen, Editor Chuck N. Tow, Chief Chartist

pared in The Business Conditions Analysis Department—Lora S. Collins, Director
es for Quantities of this chart will be supplied on request to Information Service.

Published by
THE CONFERENCE BOARD, INC.
845 Third Avenue, New York, N.Y. 10022 Avenue Louise, 207 Bte 5 B-1050 Brussels, Belgium
THE CONFERENCE BOARD OF CANADA
25 McArthur Road, Ottawa, Ontario K1L-6R3, Canada

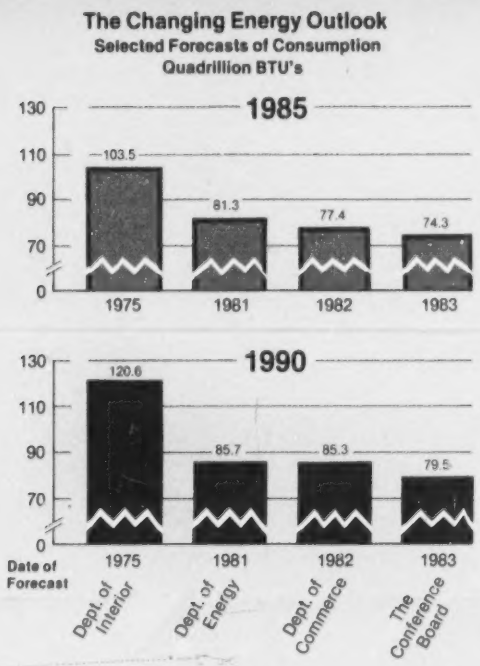
4/29 R4105-5.50A

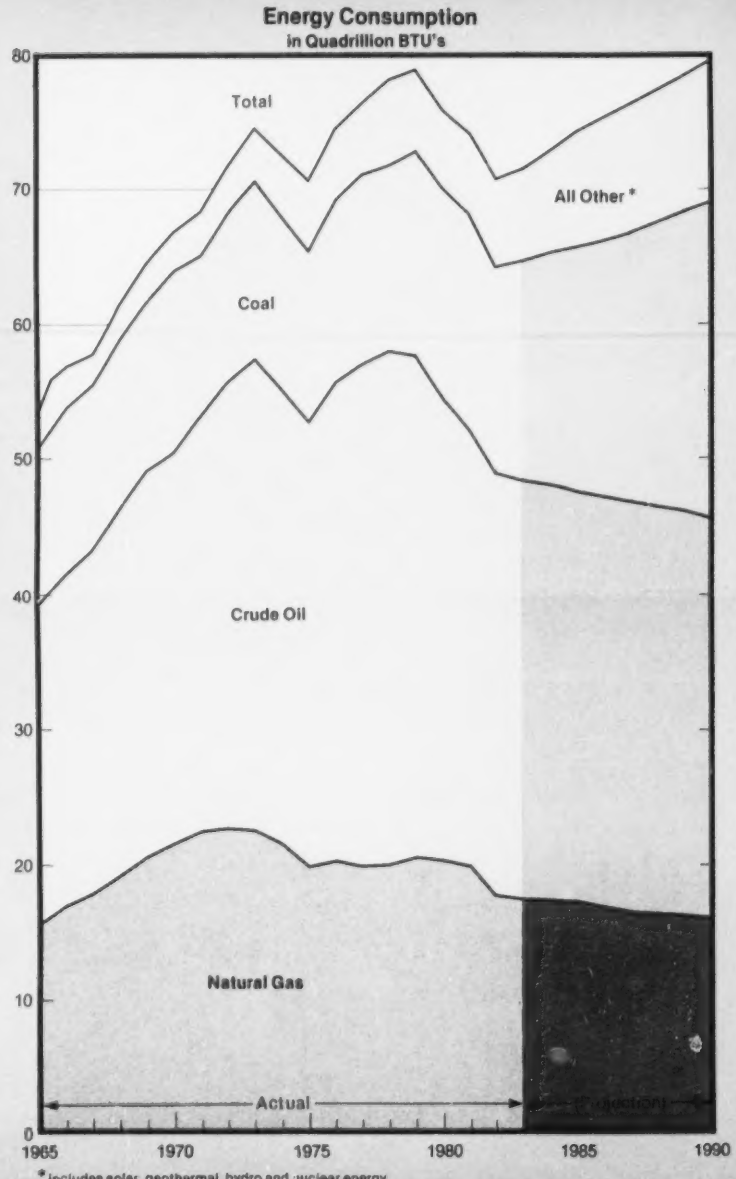
The Conference Board

Energy: Consumption Trends and Outlook

Economic Road Maps
Nos. 1946 - 1947
March, 1983

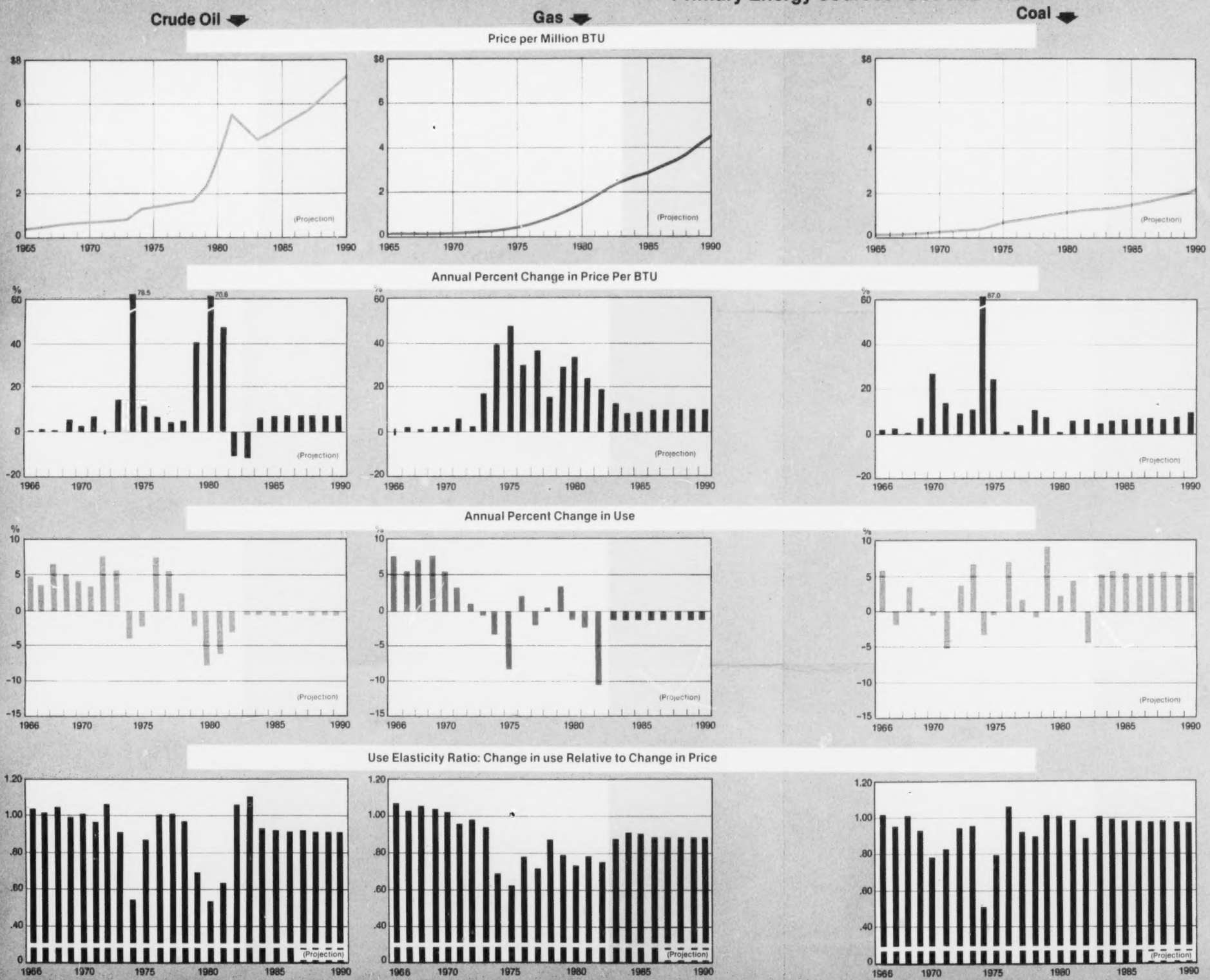
The outlook for energy demand has changed dramatically in the last decade. In the early 1970's, it was widely assumed that demand was relatively inelastic. Put another way, it was felt that even a large increase in energy price would result in only a small decline in demand. A decade's worth of experience, however, has shown substantial cuts in demand in response to successive steep price increases for petroleum and natural gas. These efforts to conserve energy and use it more efficiently mean that energy use is much more price elastic than had been assumed earlier. More recent projections of future demand reflect that fact. Another energy trend has been confirmed by experience in the last decade. Domestic energy demand has been rising more slowly than overall economic activity for many years. That was the case in the 1970's and the safest projection is that this trend will continue in the 1980's.





Energy demand projections have been scaled down progressively in recent years. The outlook data charted here are based on a few simple assumptions and are meant to serve as a current educated guess subject to revision. One set of assumptions—subject to almost immediate, and very probably repeated, revision—concerns price. The two latest developments are the drop in the price of imported oil and the scheduled decontrol of natural gas prices. Even taking those changes into account, the price per basic energy unit—BTU (British Thermal Unit, the amount of heat needed to raise one pound of water one degree Fahrenheit)—is lower for coal than for natural gas, which in turn is cheaper than oil. This projection

Primary Energy Sources: Use and Price

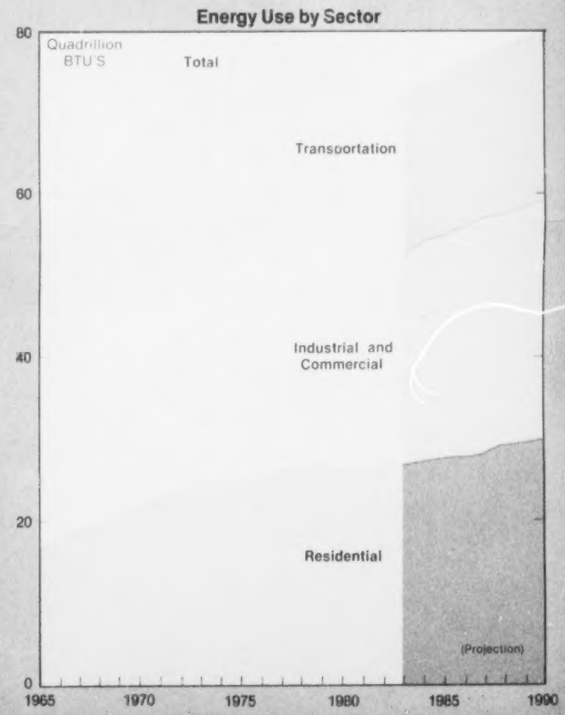


takes into account the drop in oil prices this year and assumes that, beginning in 1984, oil prices will rise slightly faster than the overall consumer price level. It assumes that natural gas prices will rise significantly faster than general prices. Since further changes in relative prices of basic energy sources are in store, continued change in market demand trends can be expected for the remainder of this decade.

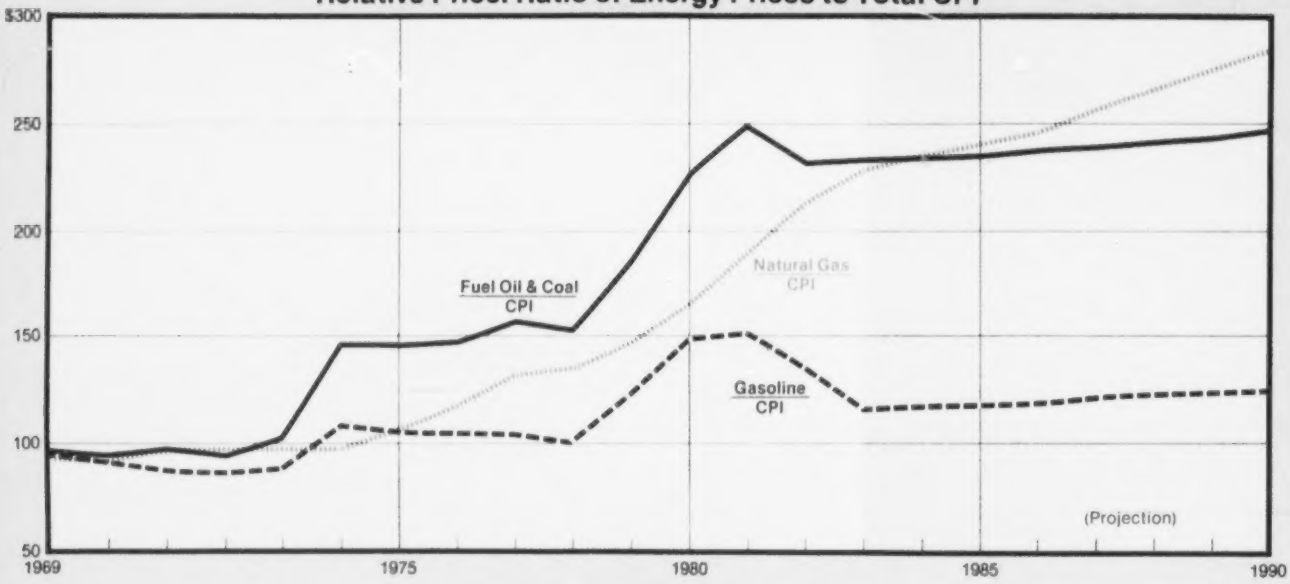
Efforts to use energy more efficiently have been noticeable in the residential and transportation sectors of the economy, but the most pronounced conservation has occurred in the industrial and commercial sector. It is assumed here that those efforts will not be abandoned simply because the price of imported oil has declined recently. In fact, given the fact of some permanent contraction in "smokestack" industries, overall energy requirements for this sector are likely to continue to decline. That assumption is in line with the view that the long-term trend of faster increases in economic activity than in energy consumption will continue. It is assumed here that the energy-to-output ratio will decline by about 2% per year in the 1980's.

One further assumption rounds out the picture. The basic sources of energy are oil, natural gas, and coal. Other sources, such as solar, geothermal, hydro and nuclear power, at present play a relatively minor, though important, role. While it is assumed that the relative share of energy coming from these sources will increase somewhat in the 1980's, oil, natural gas, and coal will continue to provide most of our energy requirements. This contrasts with an earlier outlook of a much more significant role for the alternative energy sources in the immediate future. Ken Goldstein

Sources: Departments of Commerce, Energy and Labor; The Conference Board.

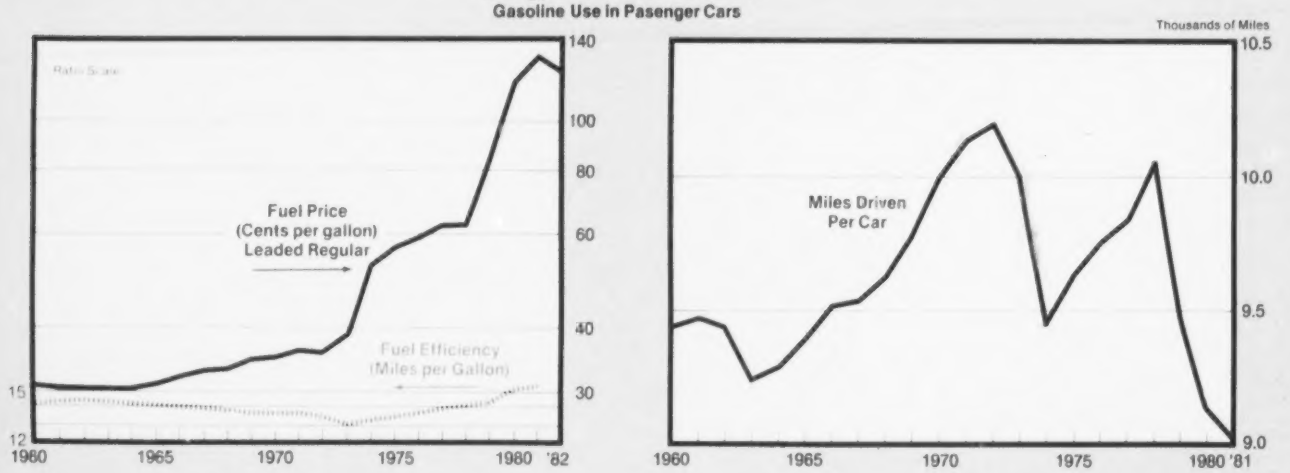


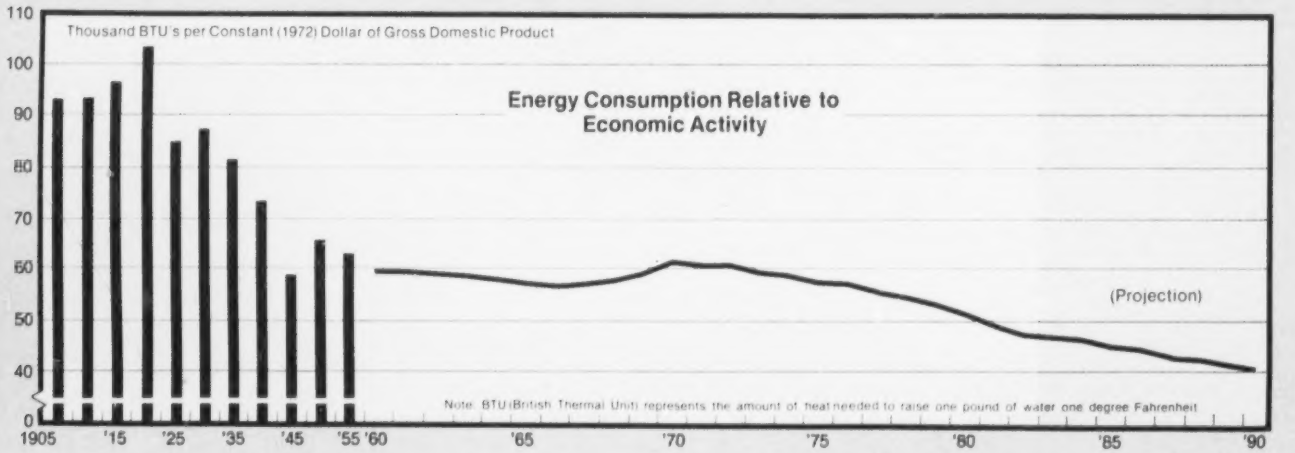
Relative Price: Ratio of Energy Prices to Total CPI



Energy and the Automobile

Gasoline Use in Pasenger Cars





ECONOMIC ROAD MAPS

Eva Culen, Editor Chuck N. Tow, Chief Chartist

Prepared in The Business Conditions Analysis Department—Lora S. Collins, Director
Prices for Quantities of this chart will be supplied on request to Information Service.

Published by
THE CONFERENCE BOARD, INC.
845 Third Avenue, New York, N.Y. 10022 Avenue Louise, 207 Bte 5 B-1050 Brussels, Belgium
THE CONFERENCE BOARD OF CANADA
25 McArthur Road, Ottawa, Ontario K1L-6R3, Canada

4/1983 R 4105 - 5 57 A

The Conference Board

Economic Road Maps
1982 Index

ECONOMIC ROAD MAPS INDEX BY SUBJECT

Bank
  Failures 1928-29
Borrowing
  Corporate 1927
Business Cycle
  Commodity Prices 1934-35
  Corporate Profits 1927
  Employment 1934-35
  Housing Starts 1934-35
  Interest Rates 1934-35
  Unemployment Rate 1934-35
Business Failures
  Liabilities 1928-29
  Number 1928-29
  Regional 1928-29
Compensation
  Automobile Industry 1938-39
  Manufacturing 1938-39
  Private Economy 1920-21
Consumer Expenditures
  Motor Vehicles 1938-39
  Oil and Gas 1938-39
Credit
  Automobiles 1938-39
Debt
  Housing 1918-19
  Individual 1918-19
Dollar
  Purchasing Power 1924-25
Employment
  Automobile Industry 1938-39
  Export Related 1930-31
  Government 1922-23, 1930-31
  Manufacturing 1930-31, 1934-35
  Nonfarm 1934-35
  Nonmanufacturing 1934-35
  Regional 1930-31
Foreign Trade
  Automobile 1938-39
  Exports 1930-31, 1936-37
Fringe Benefits
  Cost 1920-21
  Pension Plans 1920-21
  Profit Sharing 1920-21
  Savings Plans 1920-21
Gross National Product
  Business Cycle 1934-35
  Deflator 1932-33
  Real 1934-35
Housing
  Debt 1918-19
  Price 1918-19
  Regional 1918-19
  Starts 1918-19, 1934-35
  Stock 1918-19
Income
  Family 1924-25
  Per Capita 1934-35
  Personal 1924-25
  Regional 1934-35
Industrial Production
  Business Cycle 1934-35
Inflation
  Rate 1924-25
Interest Rates
  Car Loans 1938-39
  Corporate Bonds 1934-35
  Mortgage Rate 1918-19
International
  Car Registration 1938-39
  Debt 1936-37
  Eastern Europe 1936-37
  Fixed Investment 1936-37
  Government Spending 1922-23
  Motor Vehicle Production 1938-39
  National Income 1936-37
  Productivity 1932-33
  Trade 1936-37, 1938-39
Manufacturing
  Corporate Profits 1926, 1927

- Employment ... 1930-31
- Exports ... 1930-31
- Failures ... 1928-29
- Fringe Benefits ... 1920-21
- Labor Productivity ... 1932-33
- Wages and Salaries ... 1930-31

Motor Vehicles
- Capital Expenditures ... 1938-39
- Employment ... 1938-39
- Production ... 1938-39
- Registration ... 1938-39
- Sales ... 1938-39

Prices
- Automobiles ... 1938-39
- Industrial Commodities ... 1934-35

Productivity
- Output per Hour ... 1932-33
- Unit Labor Cost ... 1932-33, 1934-35

Profits
- After-Tax ... 1926
- Corporate ... 1926, 1927
- Manufacturing ... 1926
- Motor Vehicle Industry ... 1938-39
- Nonmanufacturing ... 1926
- Petroleum ... 1926, 1927
- Pretax ... 1927

Regions
- Business Failures ... 1928-29
- Housing ... 1918-19
- Income ... 1934-35

Social Security
- Federal Spending ... 1922-23
- Maximum Tax ... 1924-25
- Tax Rate ... 1924-25

State and Local
- Export Related Employment ... 1930-31
- Failure Rate ... 1928-29
- Housing Debt ... 1918-19
- Manufacturing Employment ... 1930-31
- Taxes ... 1924-25

Taxes
- Federal ... 1924-25
- Personal ... 1924-25
- Sales ... 1924-25
- Social Security ... 1924-25
- State and Local ... 1924-25
- Structure ... 1924-25

Unemployment
- Duration ... 1940-41
- Rate ... 1934-35, 1940-41
- Regional ... 1934-35

U.S. Government Outlays
- Defense ... 1922-23
- Entitlements ... 1922-23
- Interest ... 1922-23
- Social Security ... 1922-23

NUMERICAL INDEX

1918-1919	Housing
1920-1921	Employee Benefits
1922-1923	Federal Spending
1924-1925	The Two-Way Squeeze, 1982
1926	Corporate Profits 1981
1927	Profit Trends
1928-1929	Business Failures
1930-1931	U.S. Manufacturing Industry
1932-1933	Productivity: Trends and Comparisons
1934-1935	The Recession of 1981-1982
1936-1937	Eastern Europe's Trade with the West
1938-1939	The Automobile Industry in Transition
1940-1941	Unemployment: A Perspective on Recession

This series of charts is one of many prepared by The Conference Board. Further information about the Board and its research in business economics, business practices, public affairs, and personnel administration is available on request from:

INFORMATION SERVICE

Prices for quantities of these charts will be supplied upon request.

ECONOMIC ROAD MAPS

Eva Culen, Editor — Chuck N. Tow, Chief Chartist

Prepared in The Business Conditions Analysis Department—Lora S. Collins, Director

Published by

THE CONFERENCE BOARD

845 Third Avenue, New York, N.Y. 10022

25 McArthur Road
Ottawa, Ontario, Canada

Avenue Louise, 207 Bte 5
B-1050 Brussels, Belgium

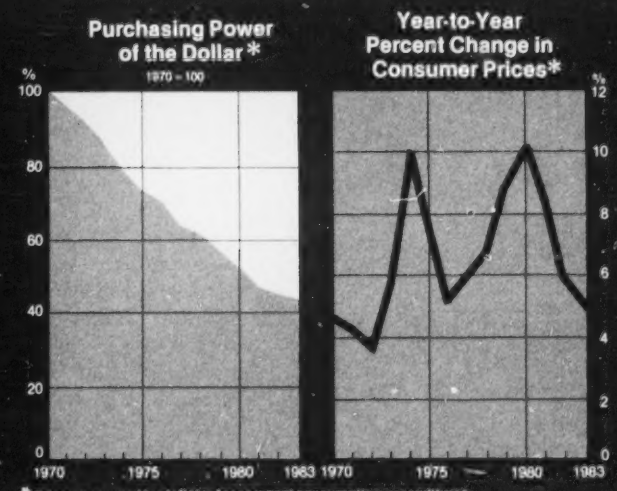
THE CONFERENCE BOARD

The Two-Way Squeeze, 1983

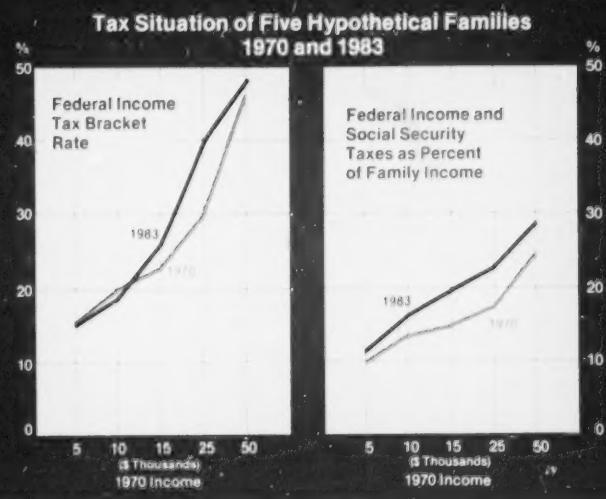
Economic Road Maps

No. 1948 April, 1983

Even if the price level rises only 5% this year, a dollar in 1983 will have only 42.8% of a 1970 dollar's purchasing power. Page 2 details the impact of inflation and federal income taxes on five hypothetical families in 1970, 1975, 1982, and 1983. The family that had $10,000 before taxes in 1970—about the average then—paid 14.9% of its income in federal income and social security taxes (chart below right). In 1983, that family needs $24,190 before taxes to have the same after-tax purchasing power it had in 1970, and its combined federal tax burden is 19.4 percent. The $5,000 1970 income was roughly the 20th percentile point of the 1970 income distribution, $15,000 was about the 80th percentile, and $25,000 was about the 95th percentile. The family-income calculations relate only to federal taxes, but the lower chart on this page shows total federal and state-local taxes as percents of total personal income.

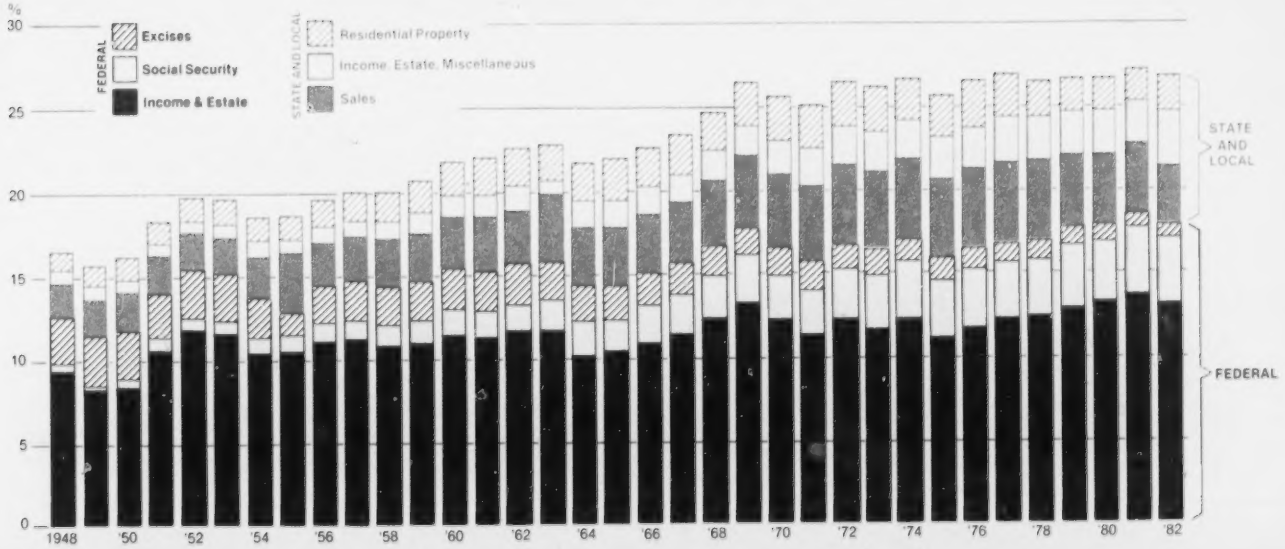


* Prices measured by deflator for personal consumption expenditures. Increase of 5% assumed for 1983.

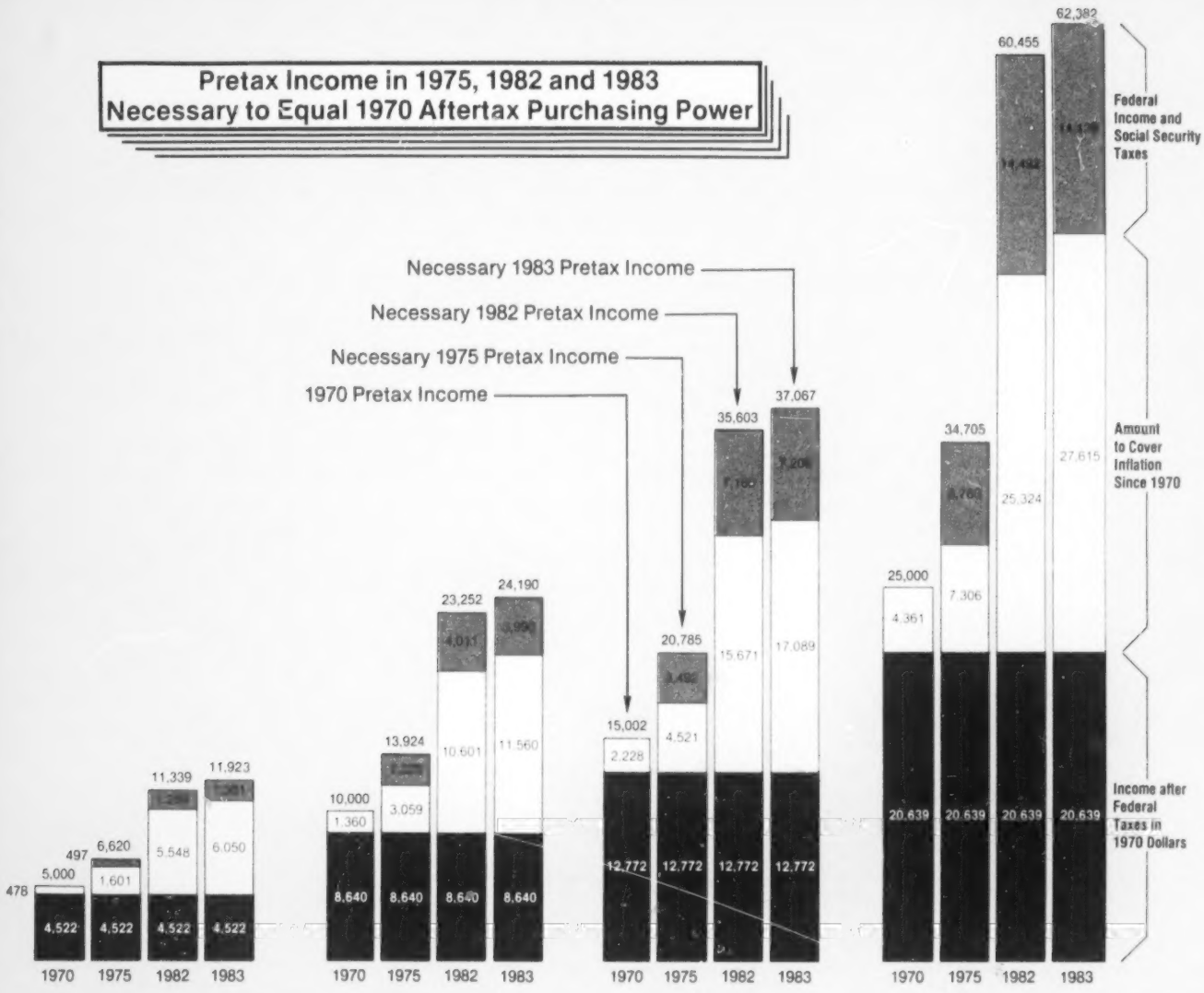


Taxes on Persons as Percent of Pretax Personal Income

(Income Excludes Transfer Payments)



Pretax Income in 1975, 1982 and 1983 Necessary to Equal 1970 Aftertax Purchasing Power



	$ 5,000	$10,000	$15,000	$25,000	$ 50,000
1970 PRETAX INCOME					
Less: Federal income tax	238	986	1,854	3,987	11,982
Less: Social security tax	240	374	374	374	374
Equals: Income after federal taxes	4,522	8,640	12,772	20,639	37,644
1975 NECESSARY PRETAX INCOME	**6,620**	**13,924**	**20,785**	**34,705**	**70,592**
Less: Federal income tax	110	1,411	2,667	5,935	18,797
Less: Social security tax	387	814	825	825	825
Less: Amount to cover inflation since 1970	1,601	3,059	4,521	7,306	13,326
Equals: Income after federal taxes, in 1970 dollars	4,522	8,640	12,772	20,639	37,644
1982 NECESSARY PRETAX INCOME	**11,339**	**23,252**	**35,603**	**60,455**	**121,922**
Less: Federal income tax	509	2,453	4,989	12,321	35,918
Less: Social security tax	760	1,558	2,171	2,171	2,171
Less: Amount to cover inflation since 1970	5,548	10,601	15,671	25,324	46,189
Equals: Income after federal taxes, in 1970 dollars	4,522	8,640	12,772	20,639	37,644
1983 NECESSARY PRETAX INCOME	**11,923**	**24,190**	**37,067**	**62,382**	**123,873**
Less: Federal income tax	552	2,369	4,814	11,736	33,469
Less: Social security tax	799	1,621	2,392	2,392	2,392
Less: Amount to cover inflation since 1970	6,050	11,560	17,089	27,615	50,368
Equals: Income after federal taxes, in 1970 dollars	4,522	8,640	12,772	20,639	37,644

Federal income and social security taxes are computed for a married couple, only one of whom works, with two children. No allowance is made for any other taxes. Calculations use the tax laws in effect each year. Deductible items are assumed to equal 17% of pretax income in 1970, 20% in other years. For calculating maximum tax and earned income credit, all income is assumed to be earned, personal service income. Inflation is calculated from the deflator for personal consumption spending, with a 5% rise assumed from 1982 to 1983.

Sources: Bureau of Economic Analysis; Internal Revenue Service; The Conference Board. Lora S. Collins

ECONOMIC ROAD MAPS

Eva Culen, Editor Chuck N. Tow, Chief Chartist

Prepared in The Business Conditions Analysis Department—Lora S. Collins, Director
Prices for Quantities of this chart will be supplied on request to Information Service.

Published by
THE CONFERENCE BOARD, INC.
845 Third Avenue, New York, N.Y. 10022 Avenue Louise, 207 Bte 5 B-1050 Brussels, Belgium
THE CONFERENCE BOARD OF CANADA
25 McArthur Road, Ottawa, Ontario K1L-6R3, Canada

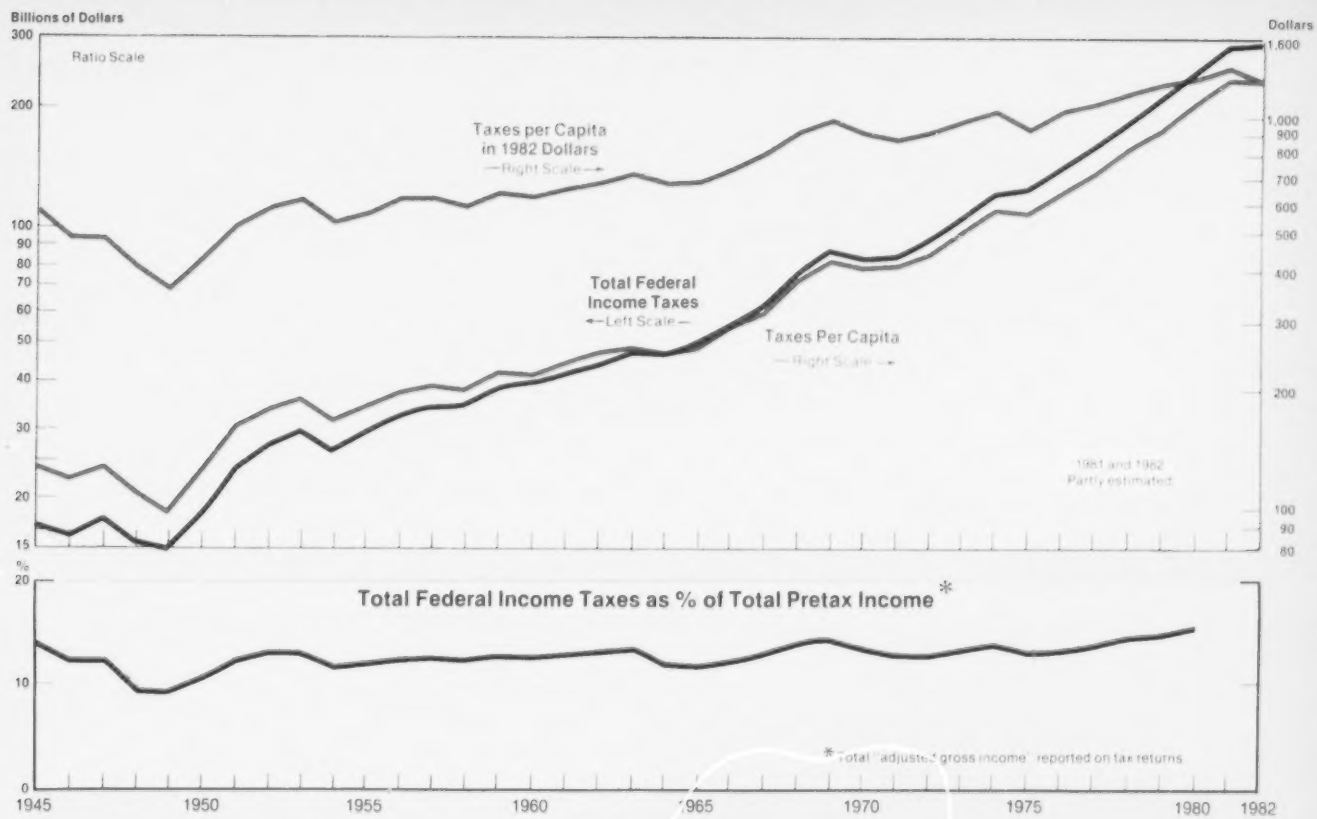
THE CONFERENCE BOARD

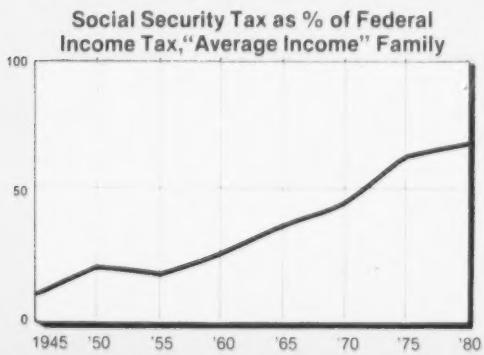
Federal Income Taxes

Economic Road Maps

No. 1949 April, 1983

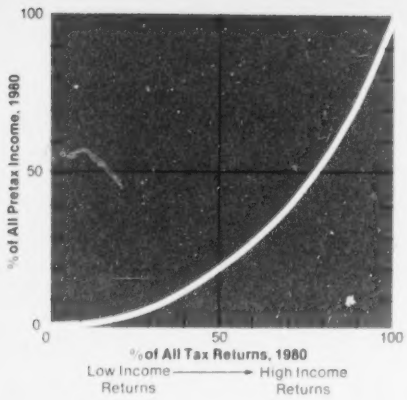
Total federal income taxes in 1982 were almost $300 billion, or about $1,260 for every person—adult and child—in the United States. Ten years earlier, total taxes were $94 billion, or about $446 per capita. The rise in total and per capita taxes partly reflects the inflation that has boosted incomes. To abstract from this, the chart below also shows per capita taxes in constant 1982 dollars. Not surprisingly, the uptrend is milder. Most of the rise in taxes over time has been paid out of rising incomes, so that the tax burden as a percent of overall income has not changed a great deal, although it did trend up in the late 1970's. Data for 1981 and 1982 are not yet available, but it is probable that the overall burden, which was 15.5% in 1980, rose a bit in 1981 and fell in 1982.

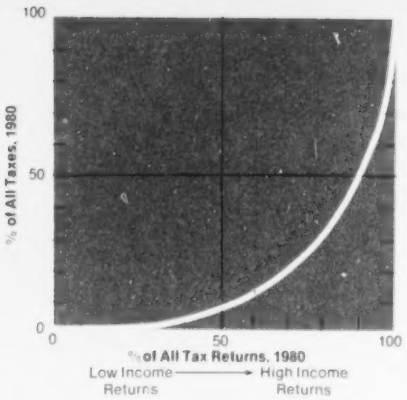

Billions of Dollars
Dollars
Ratio Scale
Taxes per Capita in 1982 Dollars —Right Scale—
Total Federal Income Taxes —Left Scale—
Taxes Per Capita —Right Scale—
1981 and 1982 Partly estimated
Total Federal Income Taxes as % of Total Pretax Income *
* Total "adjusted gross income" reported on tax returns
1945 1950 1955 1960 1965 1970 1975 1980 1982

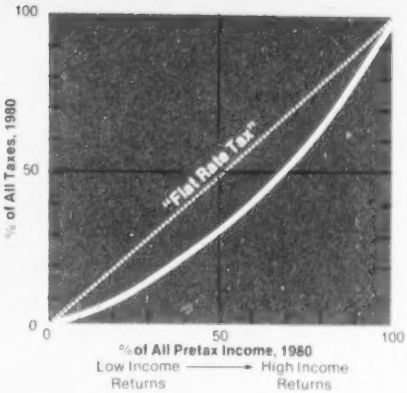


Tax bracket rates, paid on the highest segment of a taxpayer's income, have been reduced over the years. The 1983 rates are 50% in the top bracket and 11% in the first. Twenty years ago, they were 91% and 20%, respectively (page 2). The top bracket on "earned" income was limited to 60% in 1971, and subsequently to 50 percent. Other ways in which federal income taxes were cut over the years include increases in the standard deduction and in the personal exemption.

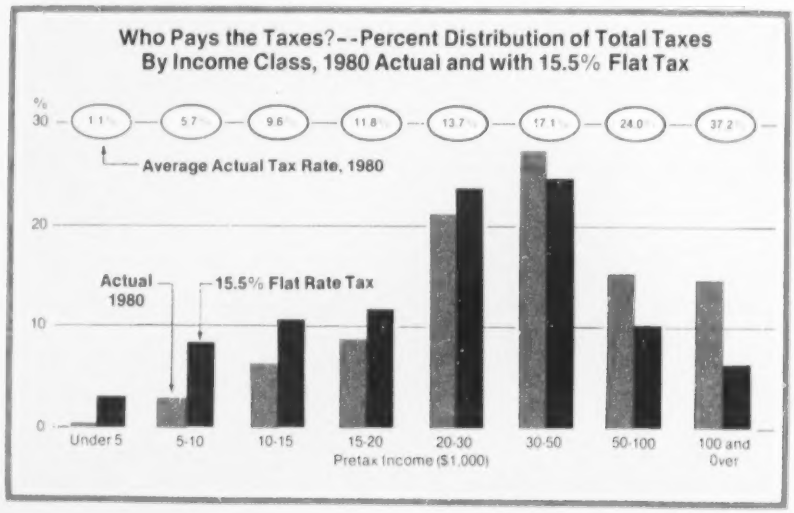
The chart at the lower right of page 2 shows the bracket rate each year for four-person, one-earner families at three assumed income levels. Although incomes have risen, the bracket rates for low- and median-income families have been fairly stable, thanks to tax cuts. However, "bracket creep" has been serious for high-income families.

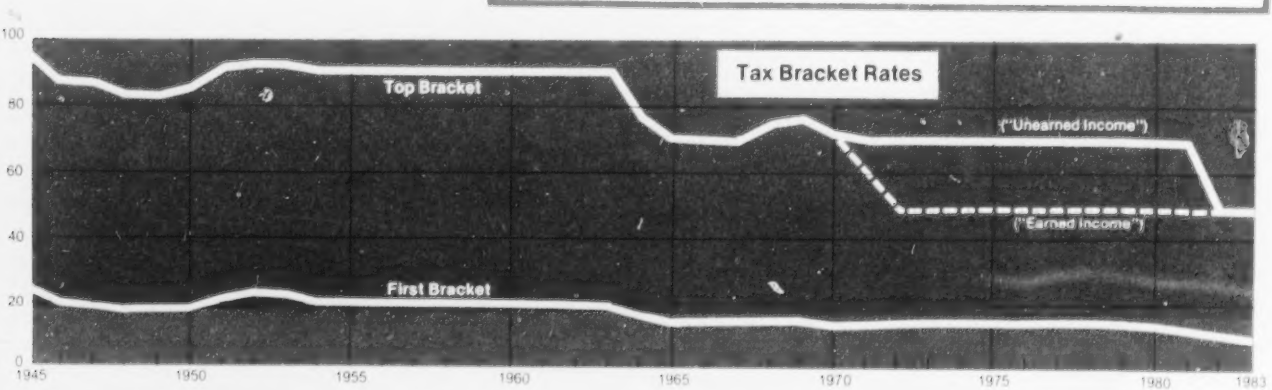






The charts at the top of the page show the inequality of incomes and the progressivity of the income tax. The lower 50% of all 1980 tax returns reported only 20% of total income and paid only 8% of total taxes; and the taxpayers reporting the lower 50% of total income paid only 30% of total taxes. There has been talk about a flat rate tax, directly proportional to income. Averaged over all returns, taxes were 15.5% of income in 1980; however, nearly 90% of all returns—those with incomes under about $35,000—had an average tax of less than 15.5 percent. Consequently, a simple flat tax (15.5%, no deductions) would have substantially redistributed the tax burden. As

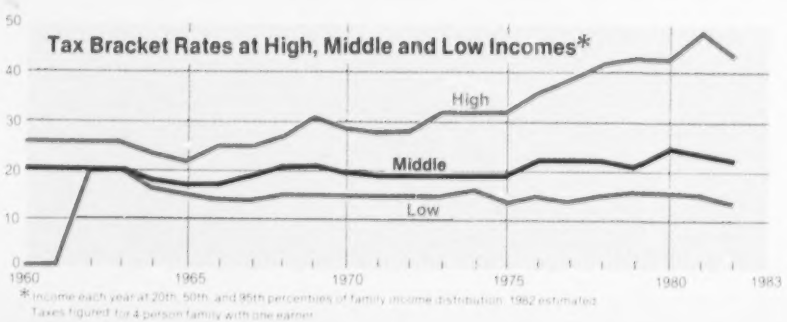




the middle right-hand chart shows, those with incomes over $30,000 paid almost 60% of total taxes in 1980, but at a flat 15.5% they would have paid only 42% of the total.

Lora S. Collins

Sources: Internal Revenue Service; Bureau of Economic Analysis; Census Bureau; Social Security Administration; The Conference Board.



ECONOMIC ROAD MAPS

Eva Culen, Editor Chuck N. Tow, Chief Chartist

Prepared in The Business Conditions Analysis Department—Lora S. Collins, Director
Prices for Quantities of this chart will be supplied on request to Information Service.

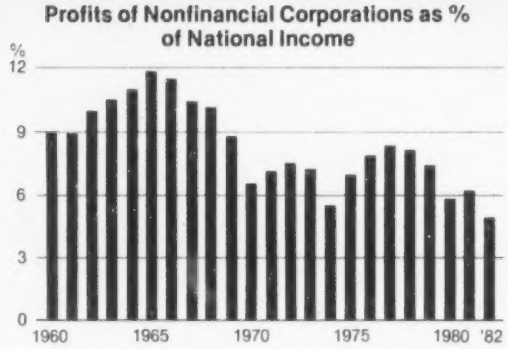
Published by
THE CONFERENCE BOARD, INC.
845 Third Avenue, New York, N.Y. 10022 Avenue Louise, 207 Bte 5 B-1050 Brussels, Belgium
THE CONFERENCE BOARD OF CANADA
25 McArthur Road, Ottawa, Ontario K1L-6R3, Canada

THE CONFERENCE BOARD

Profit Trends

Economic Road Maps
No. 1950 May, 1983

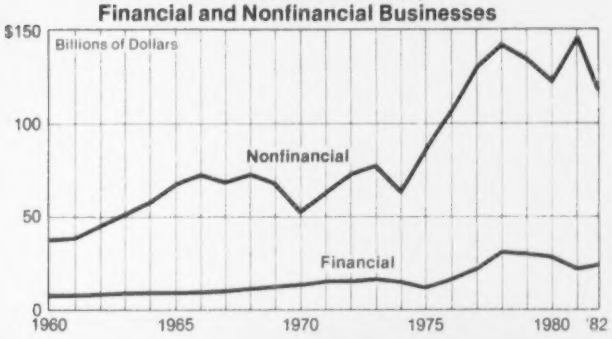
The slow pace of the economy and the continued sharp decline in the rate of inflation were the major factors affecting corporate profits during 1982. As a result, pretax profits earned in the United States were $156.8 billion, down $52.5 billion from 1981. This figure refers to "book profits," that is, profits as reported to shareholders. As a percentage of national income, profits of the nonfinancial sector have been declining for many years, from an average of about 11½% in the mid-1960's to 4.9% in 1982. The health of corporate profits mirrors the health of the nation's economy, which has gone through three recessions in less than eight years. It is hardly surprising, therefore, that corporate profits have been depressed. Having hit a cyclical peak of $222 billion in 1979, pretax book profits earned in the United States have since dropped by $65 billion, or 30 percent.



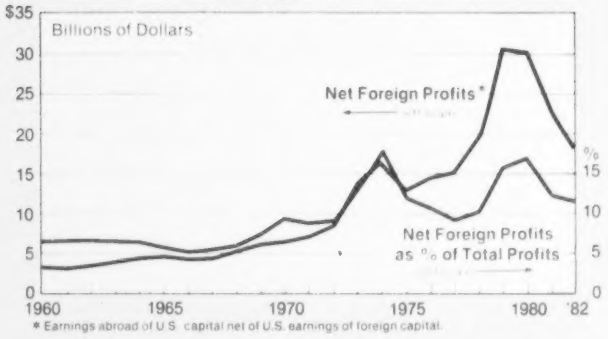
The good news is that about two-thirds of the decline reflected shrinkage in the "illusory" profits that result from underdepreciation of fixed capital and undercosting of inventory. The drop in illusory profits, from $58 billion in 1979 and $61 billion in 1980 to only $14 billion last year, is directly related to the decline in the inflation rate. The share of illusory profits in total pretax book profits declined from 20% in 1981 to 9% in 1982. The Economic Recovery Tax Act of 1981, which permits enlarged depreciation allowances under the accelerated capital recovery system, has reduced the degree of underdepreciation and has thus also been a factor in the decline of illusory profits. The elimination of illusory profits from reported book profits results in $142.8 billion of pretax economic profits for 1982, down 15% from 1981. Total reported profits, by contrast, fell 25 percent.

The decline in corporate earnings was centered in the nonfinancial sector where pretax economic profits declined 18½% in 1982. Profits of financial institutions other than the Federal Reserve rose 9% to $8.4 billion. Federal Reserve banks, which are treated as part of corporate business in the national

Pretax Economic Profits, Financial and Nonfinancial Businesses

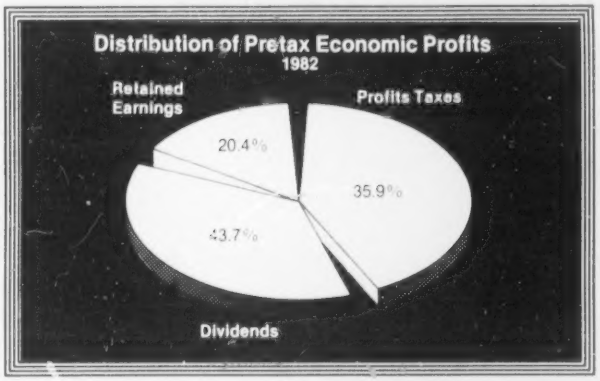


Foreign Profits

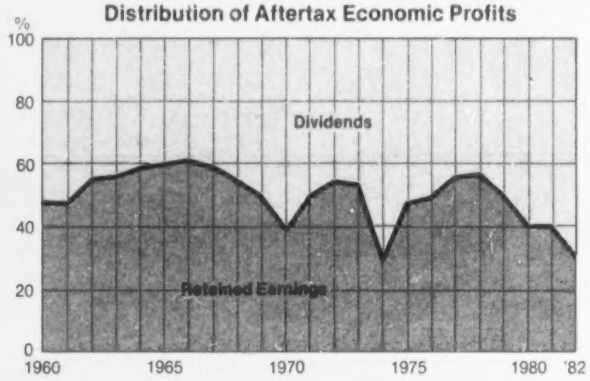


* Earnings abroad of U.S. capital net of U.S. earnings of foreign capital.

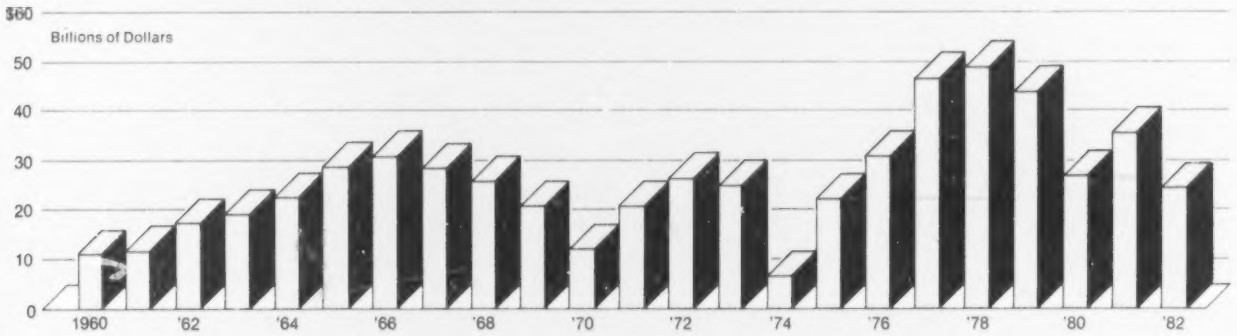
Distribution of Pretax Economic Profits 1982



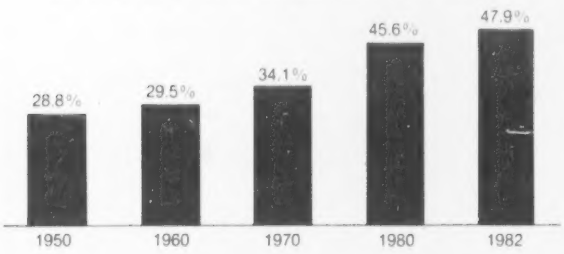
Distribution of Aftertax Economic Profits



Economic Profits Retained after Taxes and Dividends



Short-term Debt of Nonfinancial Corporations as % of Total Credit Market Debt Outstanding



income and product accounts, had pretax profits of $15.7 billion last year, up from $14.5 billion in 1981; the Fed pays over virtually all of this to the Treasury.

The share of after-tax economic profits paid out as dividends rose sharply last year to 68%, and the retained earnings' share was at an 8 year low. In absolute terms, retained economic profits slid from $53 billion in 1978 to $25 billion last year. Net profits from the rest of the world declined last year by almost $5 billion, to $18 billion. This is a net figure, reflecting U.S. owners' earnings from operations abroad less earnings of foreigners from corporate operations here.

Eva Culen

Sources: Bureau of Economic Analysis; Federal Reserve Board; The Conference Board.

ECONOMIC ROAD MAPS

Eva Culen, Editor — Chuck N. Tow, Chief Chartist

Prepared in The Business Conditions Analysis Department—Lora S. Collins, Director
Prices for Quantities of this chart will be supplied on request to Information Service.

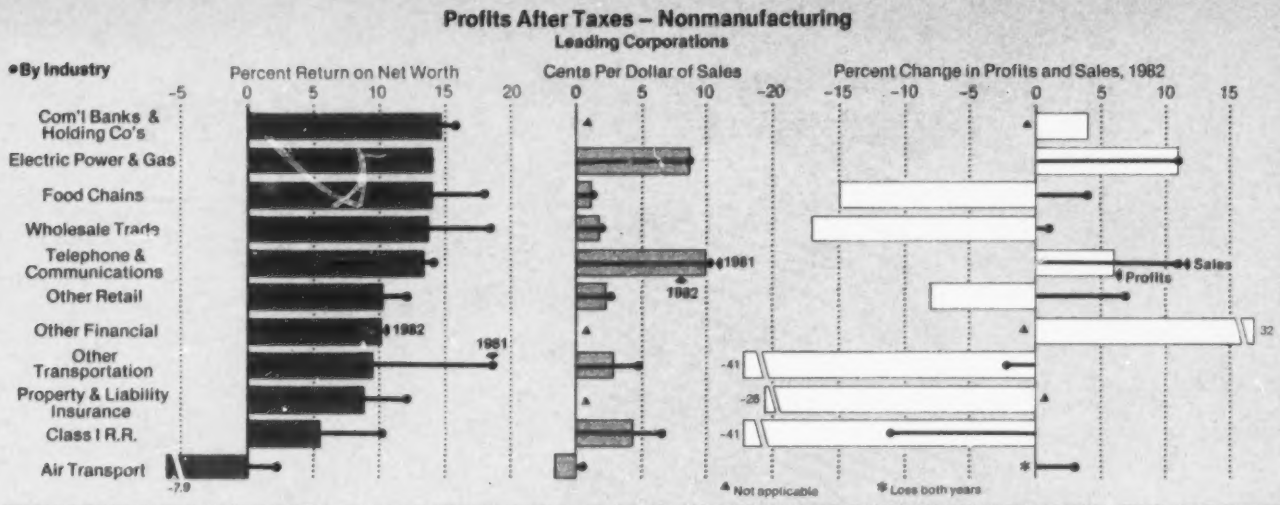
Published by
THE CONFERENCE BOARD, INC.
845 Third Avenue, New York, N.Y. 10022 Avenue Louise, 207 Bte 5 B-1050 Brussels, Belgium
THE CONFERENCE BOARD OF CANADA
25 McArthur Road, Ottawa, Ontario K1L-6R3, Canada

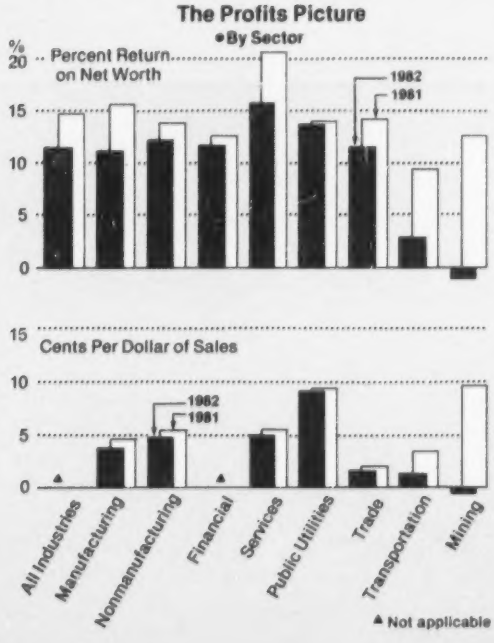
THE CONFERENCE BOARD

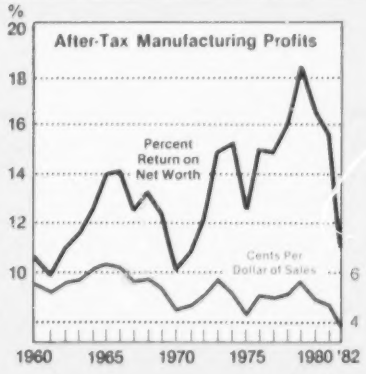
Corporate Profits 1982

Economic Road Maps
No. 1951
May, 1983

The recession took its toll of corporate profits in 1982. According to the latest Citibank survey, after-tax corporate profits as reported to shareholders declined by 15% in 1982 from their 1981 levels. All measures of profitability took a beating. Although individual sectors and industries fared differently, most showed a decline in profits and some had heavy losses. Manufacturing was the hardest hit sector, with a decline of 23% in after-tax profits; profits in the nonmanufacturing and financial sectors each slipped 3 percent.







The profit margin of manufacturing industries was 3.8 cents per dollar of sales in 1982, down from 4.7 cents in 1981 and the lowest since World War II.

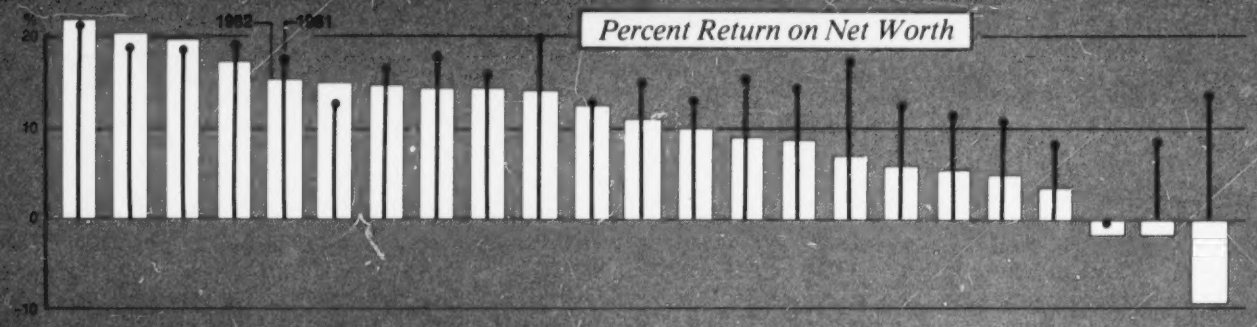
Among the detailed manufacturing industries shown on page 2, almost one-quarter had a profits decline of more than 45% and three—iron and steel, nonferrous metals, and autos sustained sizable deficits. In the nonmanufacturing sector, Class I railroads and other surface transports were the hardest hit with an after-tax profit decline of 41 percent. Both mining and air transport suffered heavy losses, but utilities, banks and other financial institutions dodged the trend and bettered their profits.

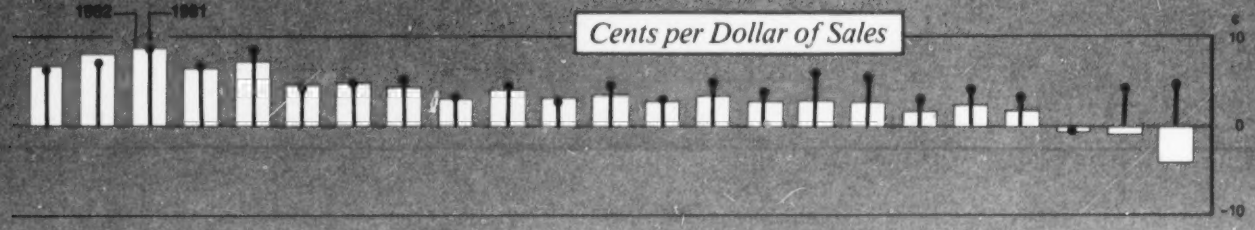
The squeeze on profit margins was reflected in rates of return on net worth, which were lower for almost all industries in 1982. For all companies in the survey, the average rate of return on equity fell to 11.4%, compared with 14.7% in 1981, and the lowest rate in a decade.

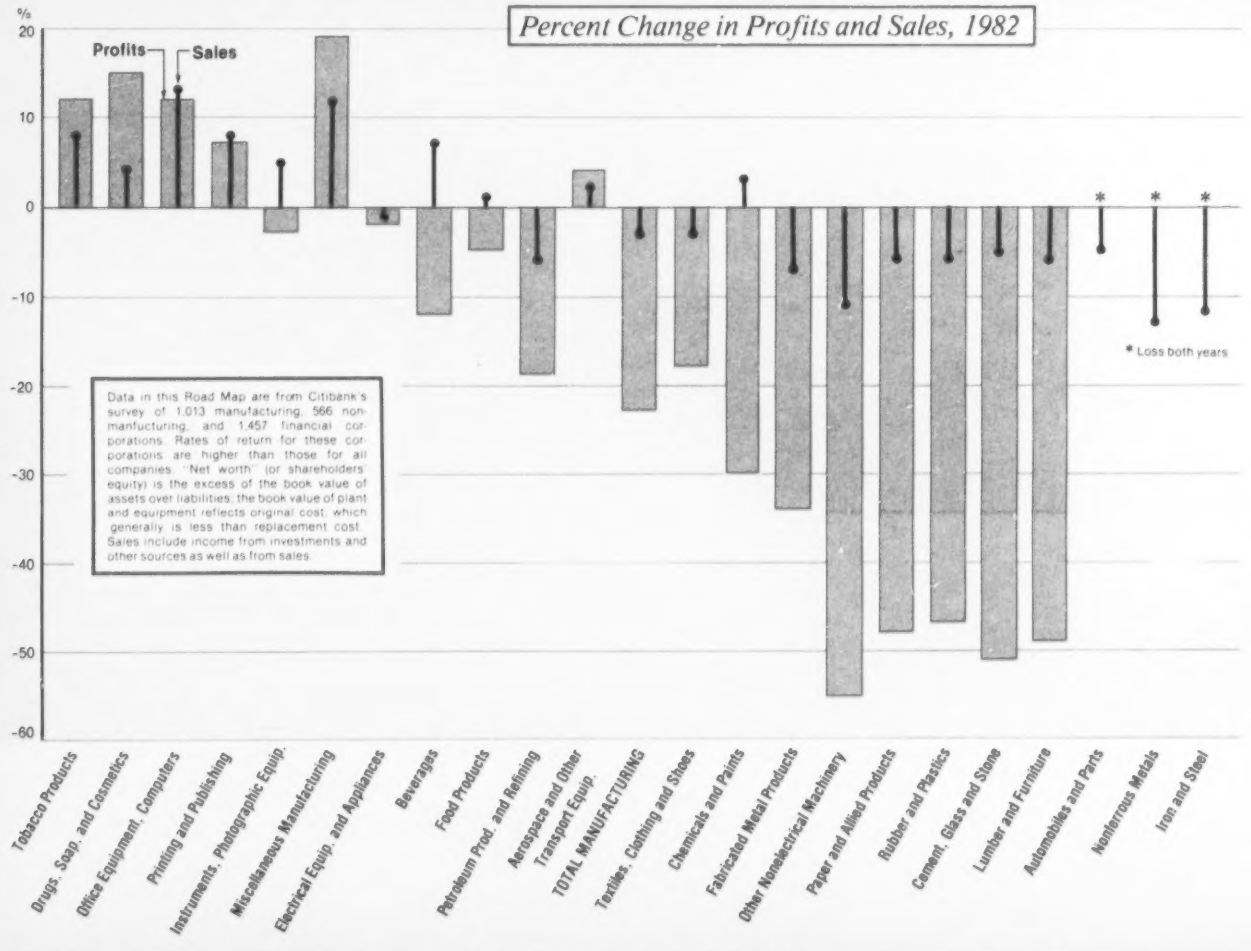
Sources: Citibank; The Conference Board.

Eva Culen

The Profit Picture in Manufacturing






Percent Change in Profits and Sales, 1982
%
20
10
0
-10
-20
-30
-40
-50
-60
Profits
Sales
* Loss both years
Data in this Road Map are from Citibank's survey of 1,013 manufacturing, 566 nonmanufacturing, and 1,457 financial corporations. Rates of return for these corporations are higher than those for all companies. "Net worth" (or shareholders' equity) is the excess of the book value of assets over liabilities; the book value of plant and equipment reflects original cost, which generally is less than replacement cost. Sales include income from investments and other sources as well as from sales.
Tobacco Products
Drugs, Soap, and Cosmetics
Office Equipment, Computers
Printing and Publishing
Instruments, Photographic Equip.
Miscellaneous Manufacturing
Electrical Equip. and Appliances
Beverages
Food Products
Petroleum Prod. and Refining
Aerospace and Other Transport Equip.
TOTAL MANUFACTURING
Textiles, Clothing and Shoes
Chemicals and Paints
Fabricated Metal Products
Other Nonelectrical Machinery
Paper and Allied Products
Rubber and Plastics
Cement, Glass and Stone
Lumber and Furniture
Automobiles and Parts
Nonferrous Metals
Iron and Steel

ECONOMIC ROAD MAPS

Eva Culen, Editor — Chuck N. Tow, Chief Chartist

Prepared in The Business Conditions Analysis Department—Lora S. Collins, Director

Prices for Quantities of this chart will be supplied on request to Information Service.

Published by

THE CONFERENCE BOARD, INC.

845 Third Avenue, New York, N.Y. 10022 Avenue Louise, 207 Bte 5 B-1050 Brussels, Belgium

THE CONFERENCE BOARD OF CANADA

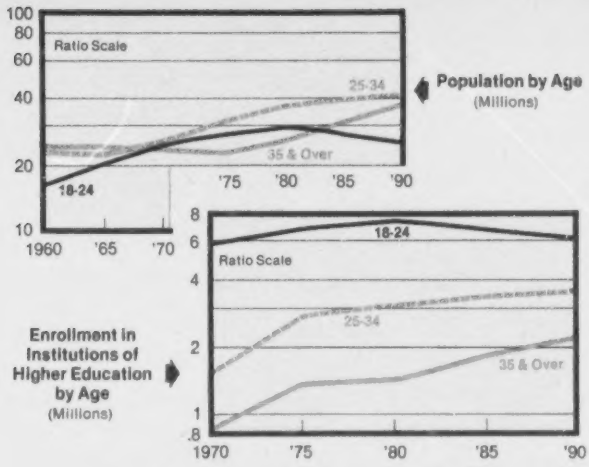
25 McArthur Road, Ottawa, Ontario K1L-6R3, Canada

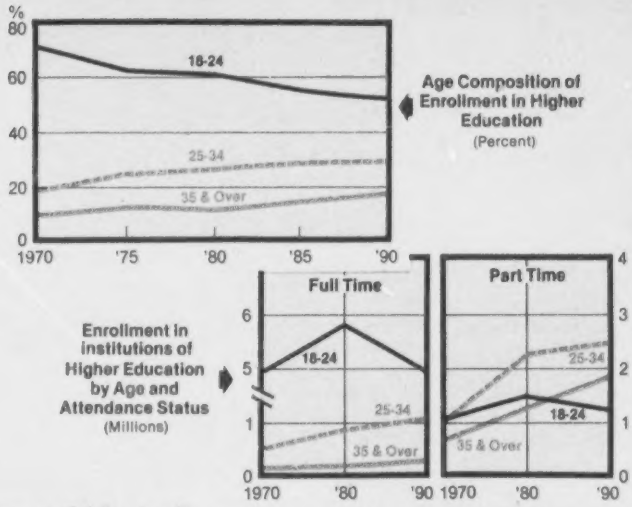
The Conference Board

Higher Education 1970–1990

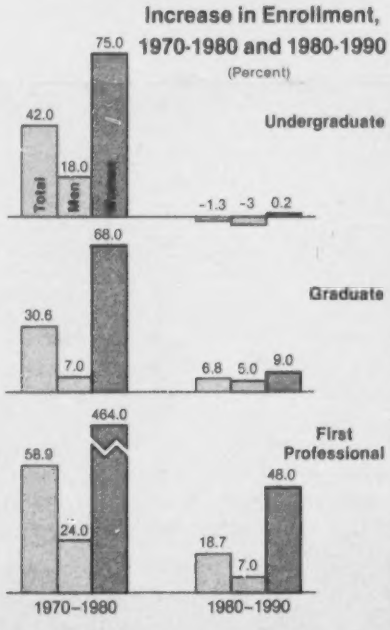
Economic Road Maps
Nos. 1952-1953 June, 1983

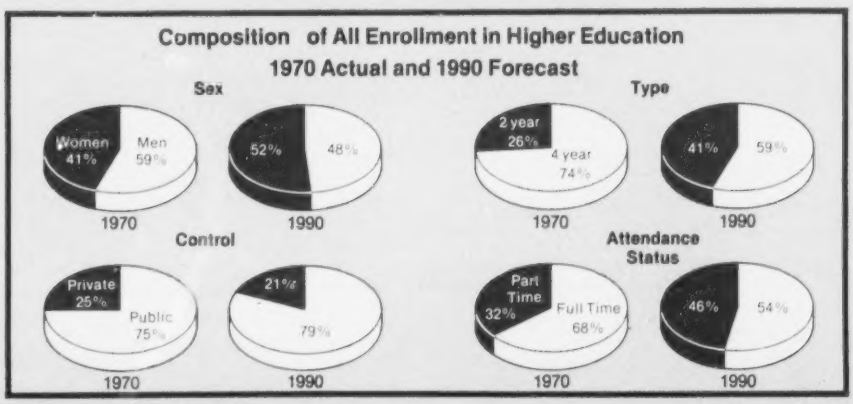
Student enrollment in the nation's colleges and universities differs vastly from what it was in the not-so-distant past. Major changes in the number of students as well as in the composition of the student body began to occur in the 1960's and will continue, although at a much slower pace, during the 1980's. The biggest change by far has been the great increase in the number of students in college: Enrollment went from 3.6 million in 1960 to 12.1 million in 1980, rose to a high of 12.6 million in 1982, and is projected to decline to around 12.1 million by the mid-1980's and to continue at that level to 1990. The enrollment data in this Road Map refer to full- and part-time students pursuing degree courses in two- and four-year colleges and graduate and professional schools.





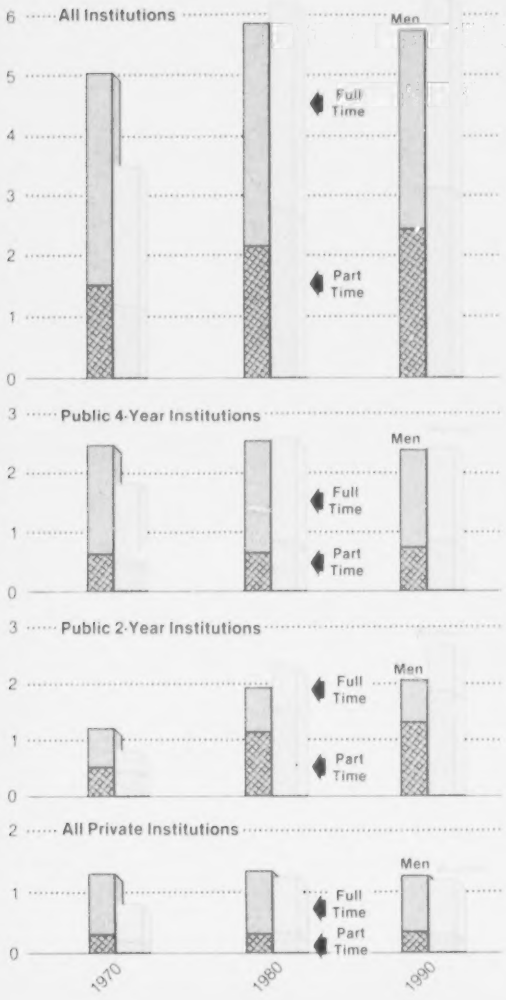
Projections by the U.S. Department of Education show a fairly small decline in total enrollment in the coming years in spite of the fact that the traditional college-age population (18-24 years) will decline by 15% between 1980 and 1990. The slack is expected to be taken up by older students. Historically, in a weak economy with a dim job market, a larger proportion of younger students tend to enroll full-time and to stay in school longer. Conversely, enrollment declines when the economy picks up. However, restrictions on federal financial aid could act as an inhibiting factor on enrollment.





Enrollment in All Institutions of Higher Education by Sex and Attendance Status of Student and Control of Institution

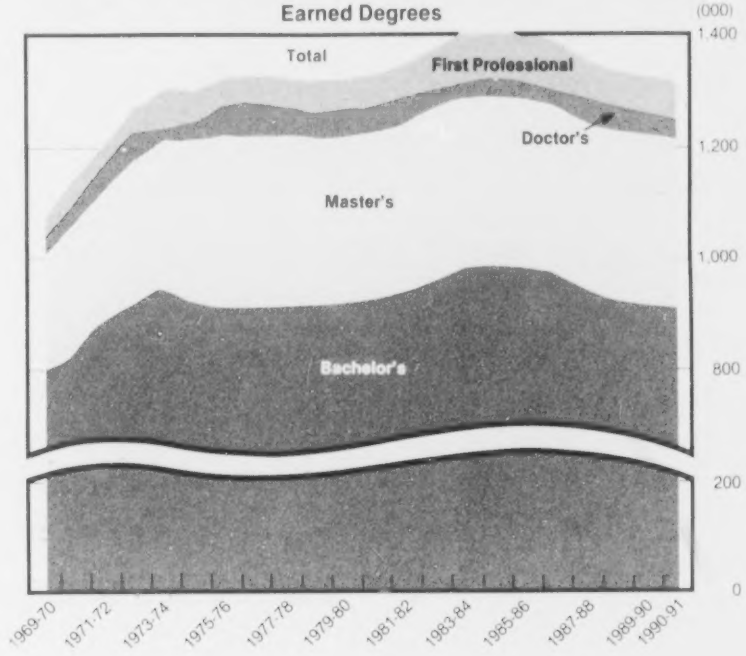
(Millions of Students)



Men comprised 59% of all students in 1970 but have been outnumbered by women since 1980. By 1990, men are expected to account for only 48% of the student total. Enrollment of women increased from 3.5 million in 1970 to 6.2 million in 1980, but is expected to grow only marginally during the next decade.

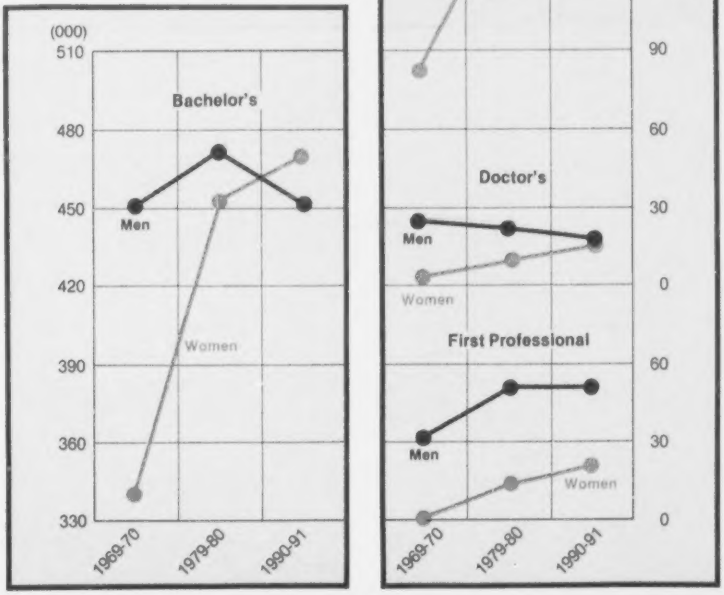
Enrollment in four-year institutions is estimated to have reached a high of 7.8 million in 1982, and is expected to decline to 7.1 million in 1990. Two-year institutions, on the other hand,

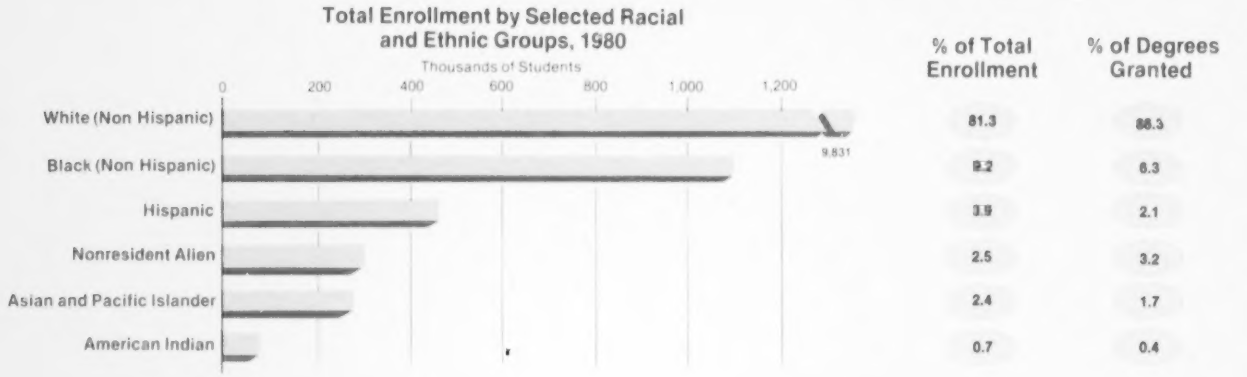
Earned Degrees

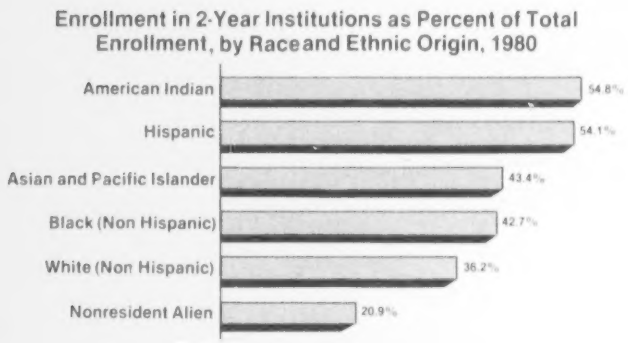


The change in the age structure of college students is one of the basic shifts that, in turn, affects other characteristics of the student population. Between 1970 and 1990, students aged 24 and under will decrease from 72% of all students to only 53%. This reflects the aging of the baby-boom generation. During the 1980's, the enrollment of students in this age group is projected to decline by 1.1 million, but the loss will be offset by a 1.1 million rise in the enrollment of older students. As older students tend to enroll on a part-time basis more often than younger students, the growth in older-student enrollment has boosted part-time enrollment. Part-time enrollment rose from 32% of total college enrollment in 1970 to 41% in 1980, and is expected to reach 46% in 1990.

Earned Degrees by Level and Sex of Student





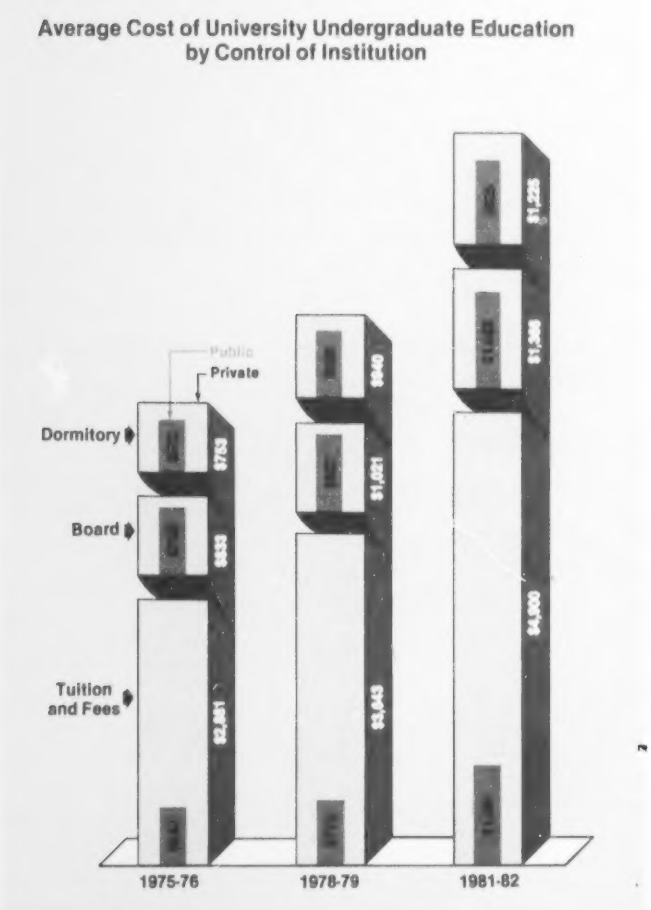


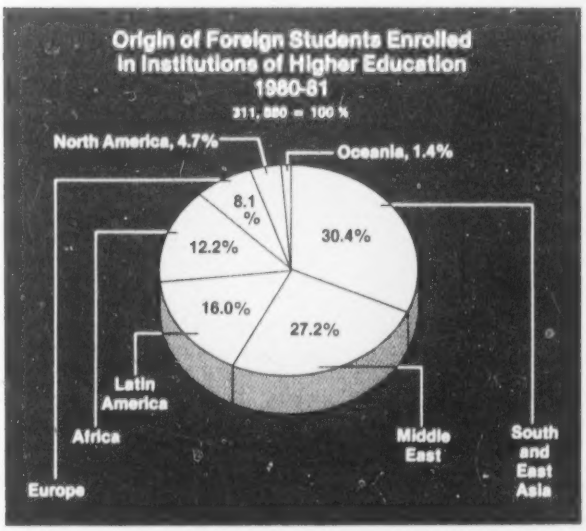
are in the midst of a boom largely because of enrollment of older students; enrollment in these schools more than doubled between 1970 and 1980, to 4.5 million, and is projected to rise to 5 million in 1990. More than half of all students enrolled in two-year institutions are part-time students. This group numbered 1.1 million in 1970, 2.8 million 1980, and is projected at 3.2 million in 1990.

A total of 1.33 million degrees were conferred in 1979-80, up 25% from a decade earlier, but approximately the same number of degrees will be conferred in 1990-91 as in 1979-80. The number of women earning degrees increased 47% between 1969-70 and 1979-80. Degrees earned by women are highly concentrated in a small group of fields such as health professions, home economics, library sciences, and education. A preponderance of the degree-recipients in these fields are women. Women earned less than a quarter of the 1979-80 degrees in engineering and physical and computer sciences.

Eva Culen

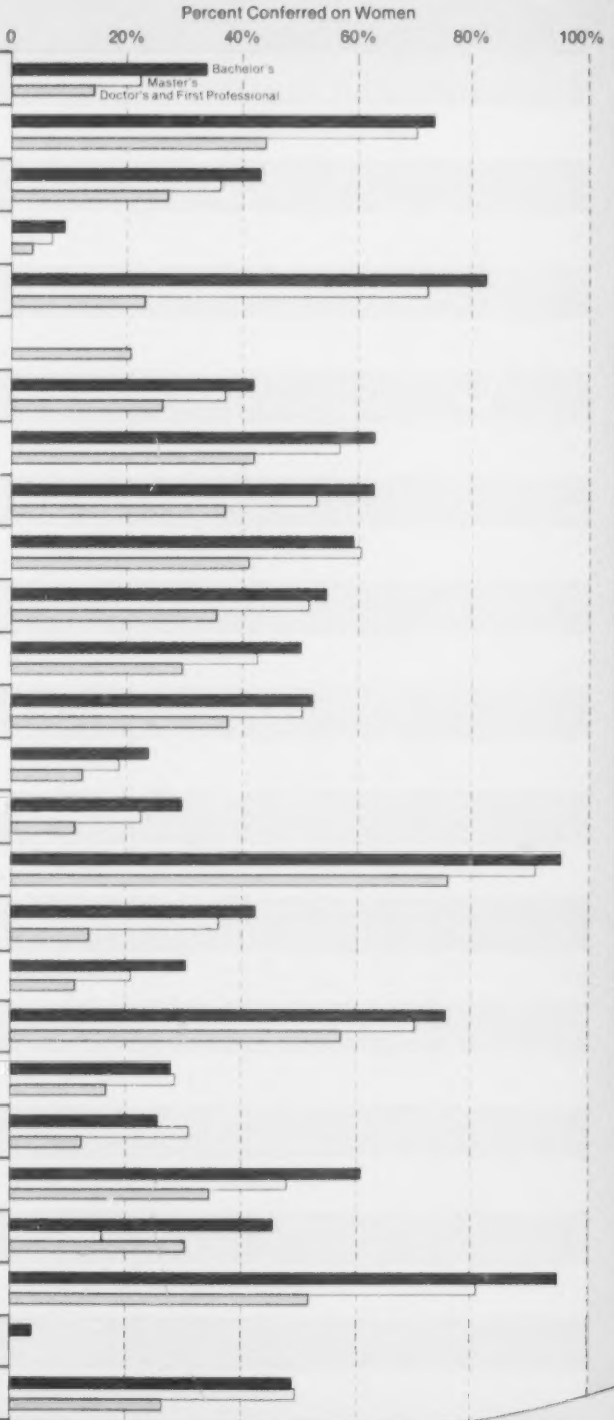
Sources: U.S. Department of Education; The Conference Board.





Degrees Conferred by Institutions of Higher Education by Field of Study, 1979-1980

Bachelor's	Master's	Doctor's and First Professional	
186,683	**55,148**	**796**	**Business and Management**
118,102	103,453	7,940	Education
103,870	**12,181**	**3,225**	**Social Sciences**
68,893	16,243	2,507	Engineering
63,920	**15,704**	**7,995**	**Health Professions**
–	–	20,160	Medicine and Dentistry
46,370	**6,510**	**3,636**	**Biological Sciences**
41,962	7,806	2,768	Psychology
40,892	**8,708**	**655**	**Fine and Applied Arts**
40,633	8,509	1,875	Letters
37,555	**20,087**	**392**	**Public Affairs and Services**
34,473	4,952	401	Interdisciplinary Studies
28,616	**3,082**	**193**	**Communications**
23,410	5,219	3,089	Physical Sciences
22,802	**3,976**	**991**	**Agriculture and Natural Resources**
18,411	2,690	192	Home Economics
11,378	**2,860**	**724**	**Mathematics**
11,154	3,647	240	Computer and Information Science
11,133	**2,236**	**549**	**Foreign Languages**
9,132	3,139	79	Architecture and Environmental Design
6,207	**3,922**	**8,434**	**Theology**
2,489	772	145	Area Studies
683	**1,817**	**35,687**	**Law**
398	5,374	73	Library Sciences
251	**46**	**–**	**Military Science**
929,417	298,081	102,746	All Fields



ECONOMIC ROAD MAPS

Eva Culen, Editor Chuck N. Tow, Chief Chartist

Prepared in The Business Conditions Analysis Department—Lora S. Collins, Director
Prices for Quantities of this chart will be supplied on request to Information Service.

Published by
THE CONFERENCE BOARD, INC.
845 Third Avenue, New York, N.Y. 10022 Avenue Louise, 207 Bte 5 B-1050 Brussels, Belgium
THE CONFERENCE BOARD OF CANADA
25 McArthur Road, Ottawa, Ontario K1L-6R3, Canada

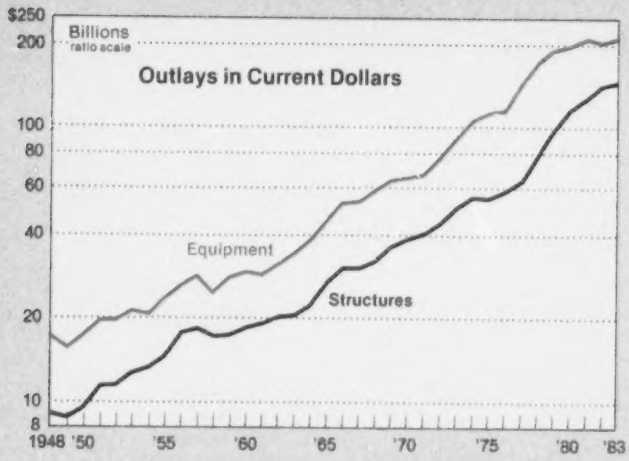
Business Capital Investment

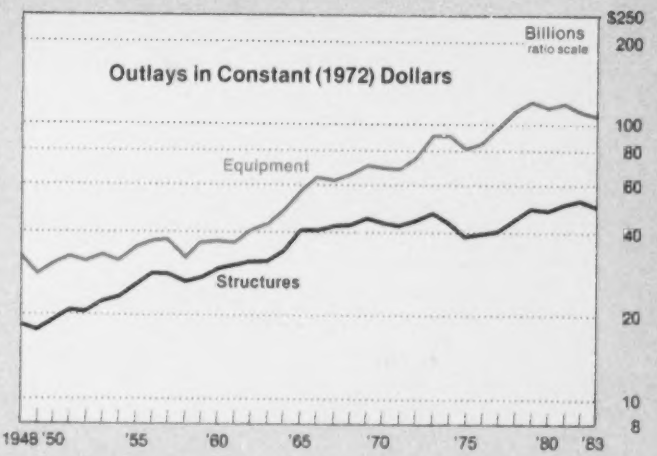
Economic Road Maps
No. 1954

July 1983

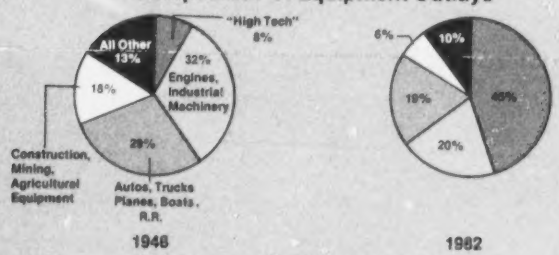
Last year, nonresidential fixed investment totaled $348 billion, or 11.4% of GNP, but most of the outlays were for replacement of fixed capital that was ending its useful life; only about 2% of GNP consisted of net additions to the capital stock. Averaged over the years to smoothe out business cycle swings, net additions to the capital stock have persistently run at about 3% of GNP (see chart on page 2 of Road Map 1955). The growth rates at the bottom of this page are calculated between peak years of the business cycle in order to minimize cyclical effects. By far the fastest growing major investment category is what is here loosely called "high tech" equipment. This includes computers, instruments and communications equipment but not such items as computer-controlled machine tools. Last year, "high tech" equipment accounted for 45% of equipment outlays, compared with 8% in 1948.

Private, Nonresidential Fixed Investment

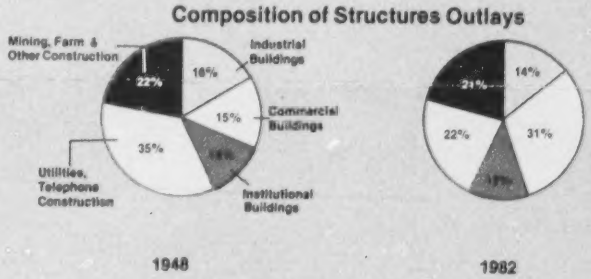




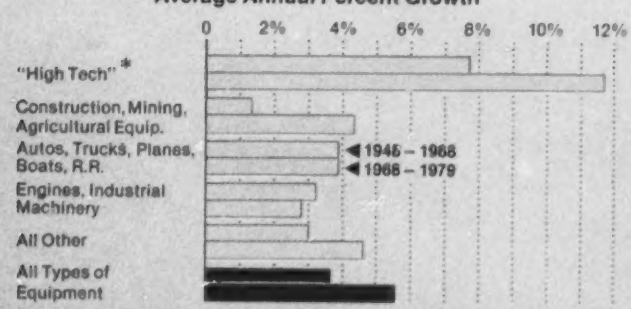
Composition of Equipment Outlays



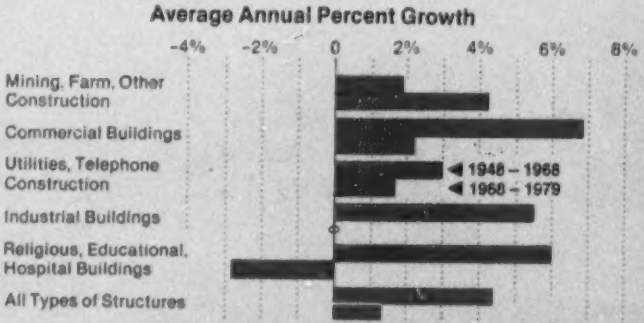
Composition of Structures Outlays



Average Annual Percent Growth

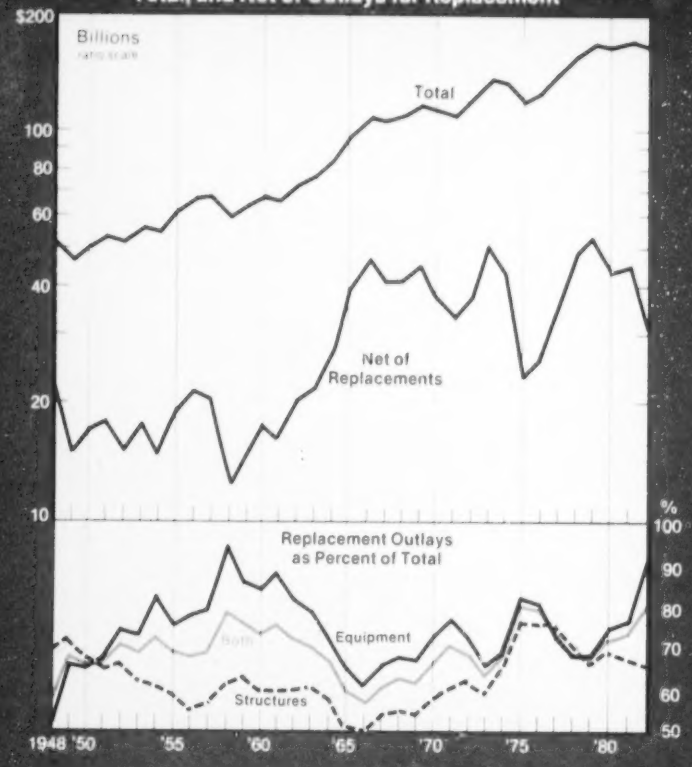

0 2% 4% 6% 8% 10% 12%
"High Tech" *
Construction, Mining, Agricultural Equip.
Autos, Trucks, Planes, Boats, R.R.
Engines, Industrial Machinery
All Other
All Types of Equipment
◀ 1948 – 1968
◀ 1968 – 1979

Average Annual Percent Growth

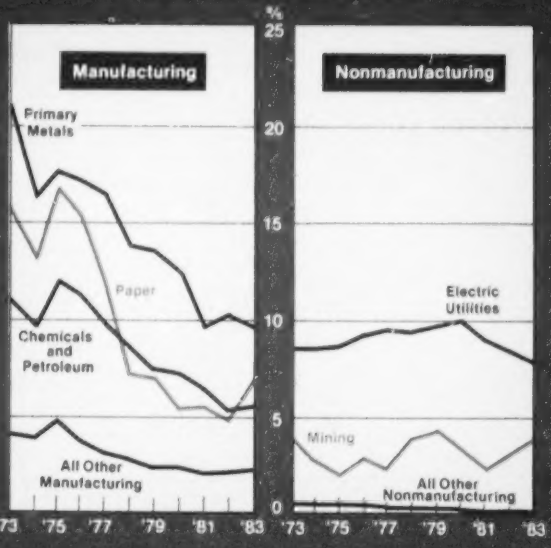


*"High Tech" equipment comprises computers, other office equipment, instruments, and communications equipment.

Nonresidential, Fixed Investment Outlays in Constant (1972) Dollars— Total, and Net of Outlays for Replacement



Outlays for Pollution Abatement as Percent of Total Fixed Investment Outlays

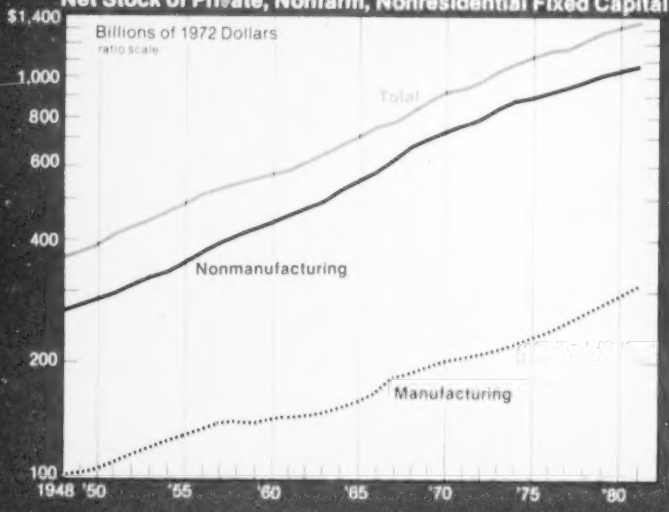


Since the mid-1960's, there has been essentially no change in the real volume of fixed investment outlays (upper left chart). These net outlays are the fuel for growth in the stock of fixed capital. The chart immediately below shows growth rates of the capital stock in real terms, and growth rates of capital/labor ratios, which have substantial influence on labor productivity. In manufacturing, the stock and the capital/labor ratio rose briskly in the 1970's. However, in some industries a substantial share of the growth was in capital employed for pollution abatement, that is, for the production of cleaner air and water rather than marketable products (see top right chart).

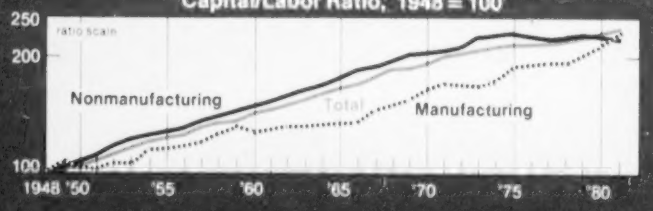
Lora S. Collins

Sources: Bureau of Economic Analysis; The Conference Board.

Net Stock of Private, Nonfarm, Nonresidential Fixed Capital

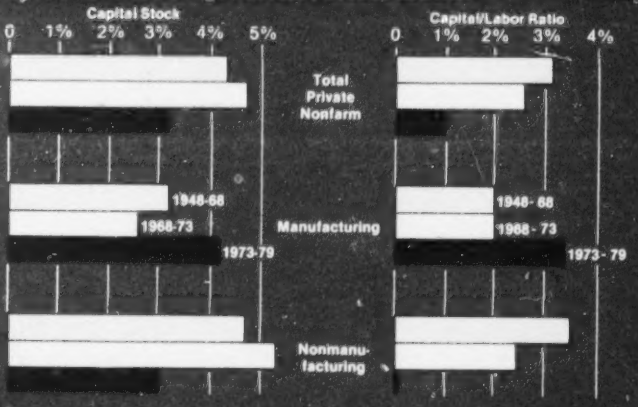


Capital/Labor Ratio,* 1948 = 100



* Constant dollar net capital stock divided by total manhours available, including those of the unemployed.

Average Annual Percent Growth



ECONOMIC ROAD MAPS

Eva Culen, Editor — Chuck N. Tow, Chief Chartist

Prepared in The Business Conditions Analysis Department—Lora S. Collins, Director
Prices for Quantities of this chart will be supplied on request to Information Service.

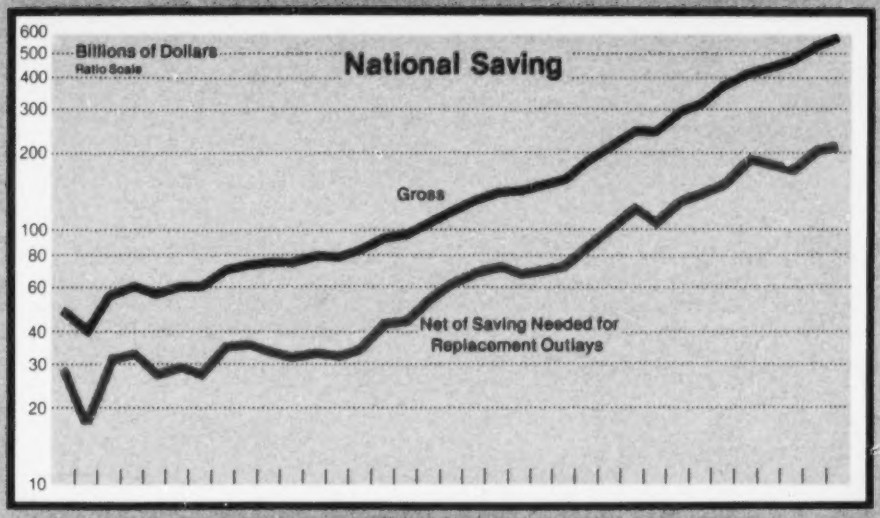
Published by
THE CONFERENCE BOARD, INC.
845 Third Avenue, New York, N.Y. 10022 Avenue Louise, 207 Bte 5 B-1050 Brussels, Belgium
THE CONFERENCE BOARD OF CANADA
25 McArthur Road, Ottawa, Ontario K1L-6R3, Canada

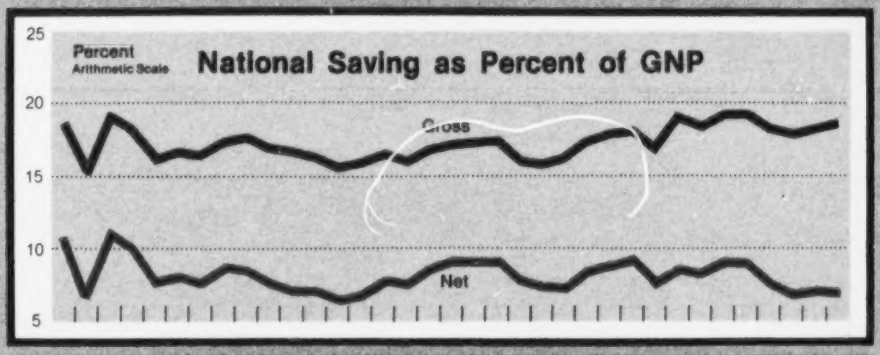
THE CONFERENCE BOARD

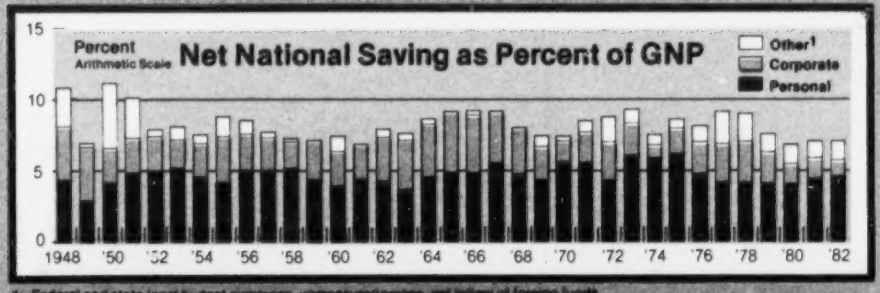
National Saving and Investment

Economic Road Maps
No. 1955 July, 1983

Most of the output of our economy is used up, or "consumed," as it is produced. The concommitant is that most of the income generated in our economy is spent on goods and services for immediate use, not saved. In 1982, gross national saving amounted to $570 billion, or 18.6% GNP. However, almost two-thirds of that represented the resources necessary simply to replace investment goods that were ending their useful lives. Investment goods are structures and equipment that yield services over a period of years and are used up gradually. The remainder of national saving, a mere 7% of GNP, represented the resources available in 1982 for net additions to the nation's stock of investment goods, that is, of productive capital. However, more than half of that net saving was absorbed in covering the federal deficit.

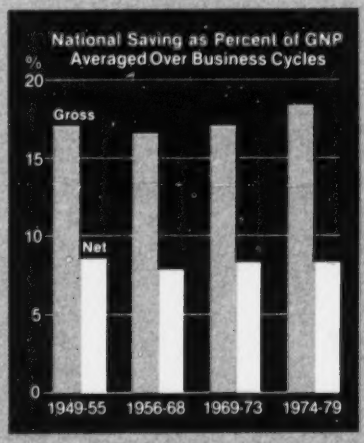






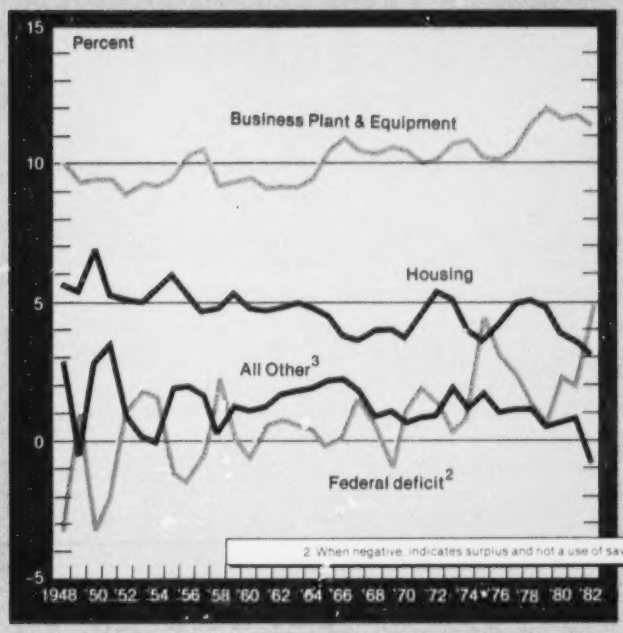
1. Federal and state-local budget surpluses, unmeasured saving, net inflow of foreign funds.

The middle left chart shows the historical record of gross and net saving as percents of GNP. The panel immediately below smooths out that record by averaging the data over business cycles, from a recession year to a peak year in each case. The ratio of gross saving to GNP rose slightly in the 1970's, but this simply reflected a rising need for replacement outlays. The ratio of net saving to GNP has been

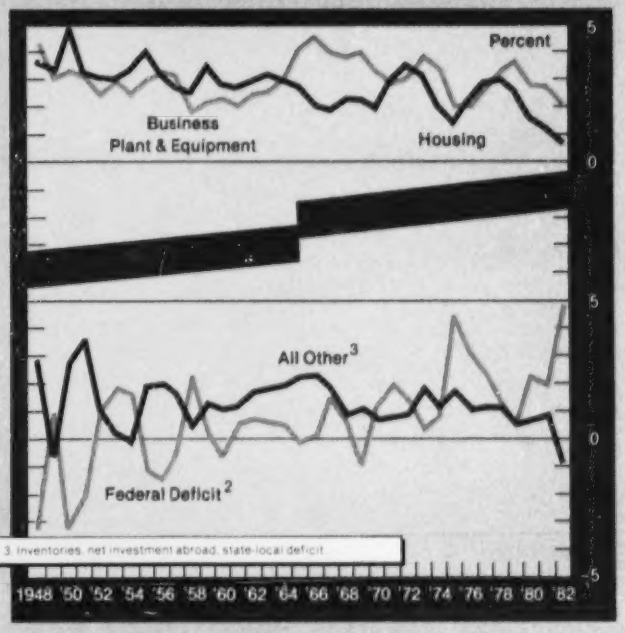


extraordinarily stable in the past three decades; that is, there has been an extraordinary stability in our national willingness to make resources available for net additions to the capital stock. The component sources of net national saving are shown in the bottom chart.

Uses of Gross Saving, as Percent of GNP


Percent
Business Plant & Equipment
Housing
All Other[3]
Federal deficit[2]
2. When negative, indicates surplus and not a use of saving. 3. Inventories, net investment abroad, state-local deficit
15
10
5
0
-5
1948 '50 '52 '54 '56 '58 '60 '62 '64 '66 '68 '70 '72 '74 '76 '78 '80 '82

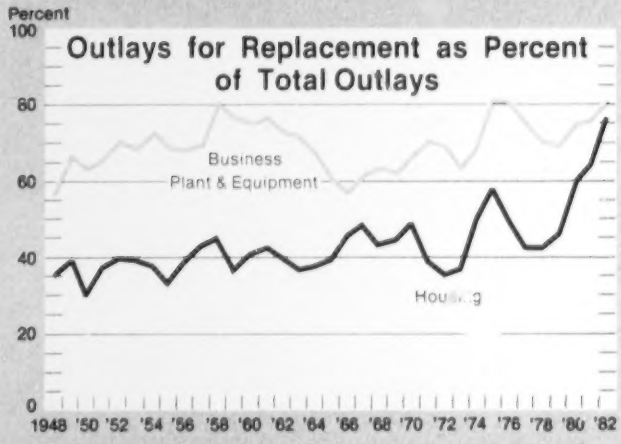
Uses of Net Saving, as Percent of GNP



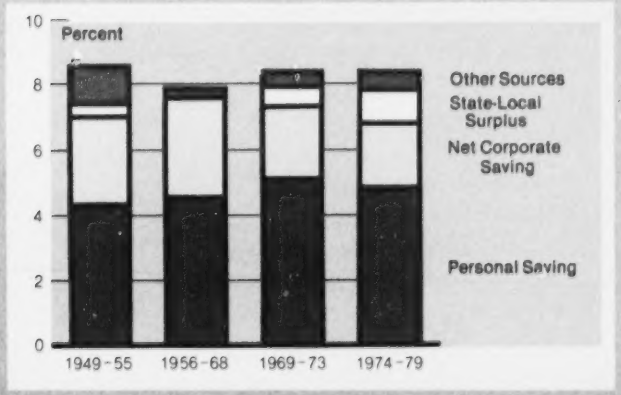
The panels above show how gross and net national saving are used. In recent years, a good part of the net saving generated in the private sector was used not for net additions to the stock of private investment goods but rather to cover the federal deficit. The panels below show the sources and uses of net national saving averaged over business cycles, and illustrate that the rise in the share absorbed by the federal deficit has had as its counterpart a drop in other shares.

Lora S. Collins

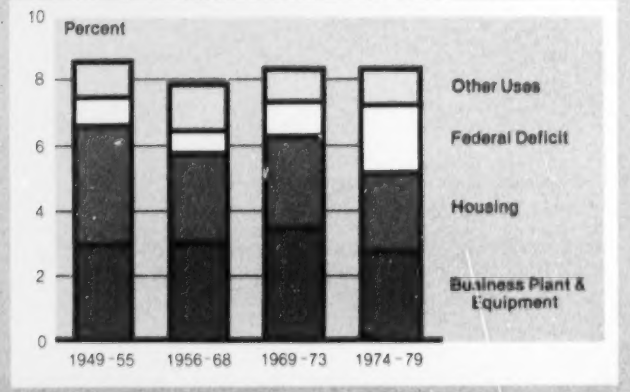
Sources: Bureau of Economic Analysis;
The Conference Board



Sources of Net Saving, as Percent of GNP Averaged Over Business Cycles



Uses of Net Saving, as Percent of GNP Averaged Over Business Cycles



ECONOMIC ROAD MAPS

Eva Culen, Editor Chuck N. Tow, Chief Chartist

Prepared in The Business Conditions Analysis Department—Lora S. Collins, Director
Prices for Quantities of this chart will be supplied on request to Information Service.

Published by
THE CONFERENCE BOARD, INC.
845 Third Avenue, New York, N.Y. 10022 Avenue Louise, 207 Bte 5 B-1050 Brussels, Belgium
THE CONFERENCE BOARD OF CANADA
25 McArthur Road, Ottawa, Ontario K1L-6R3, Canada

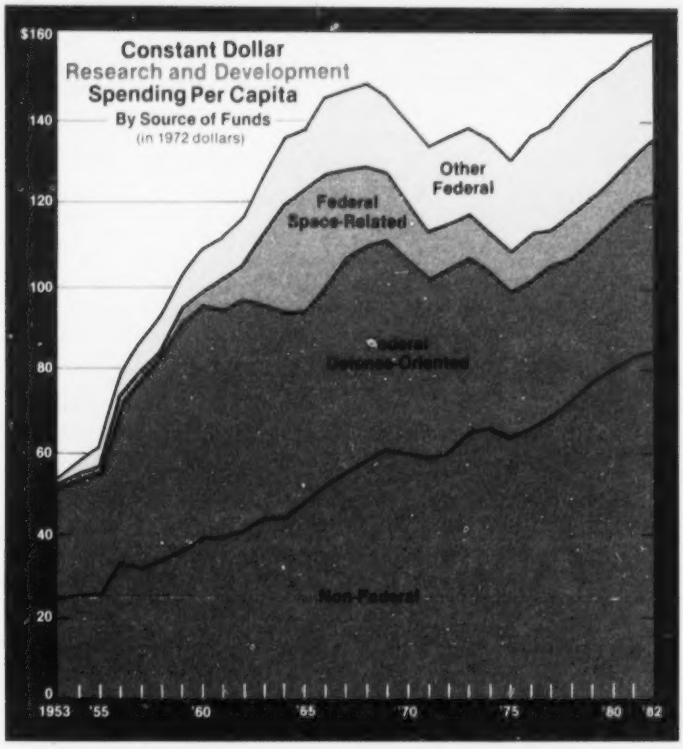
B1105-C.57 2

THE CONFERENCE BOARD

Research and Development

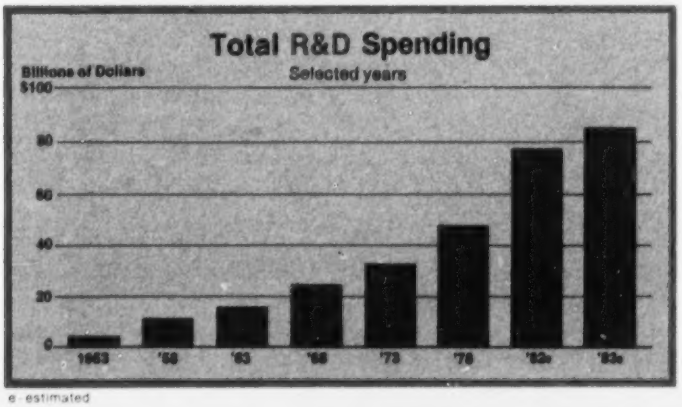
Economic Road Maps
No. 1956 August, 1983

An estimated $85 billion, which amounts to approximately 2½% of our GNP, is being spent on research and development in 1983. Twenty-five years ago, we spent only $11 billion on R&D, but that amount was also equal to about 2½% of GNP. In fact, an almost constant share of our economic resources has been directed over the years toward developing more efficient methods of production, better product design, or entirely new products. The goals of the R&D effort are to increase basic knowledge and to obtain a better understanding of how to transform raw materials, through the application of labor and capital, into useful commodities. Reaching these goals is often a lengthy, expensive, difficult and not altogether direct process.

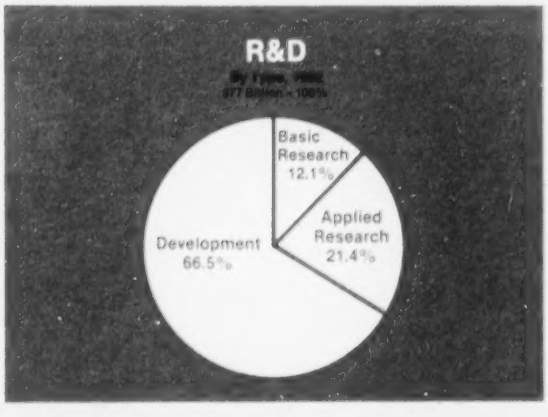


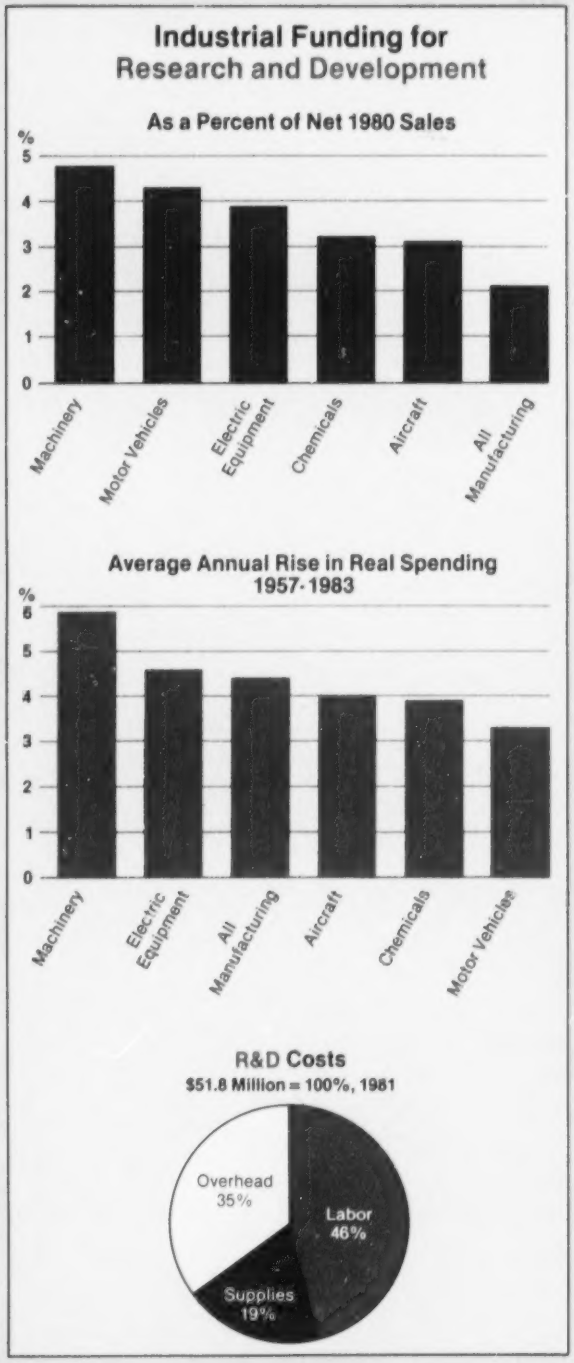
There is a constancy to the three-staged R&D process. The first step is alway *Basic Research*—original, unguided, unspecified investigation aimed at increasing knowledge. Ideas developed in the "ivory tower" investigation are explored for practical usage in the second stage, *Applied Research*. If and when a practical application is identified, an attempt is made to exploit it in the production of useful devices or processes in the third stage *Development*. In 1982, 12% of the total R&D budget was devoted to *Basic Research* and about two-thirds of that amount was financed by the Federal Government. *Applied Research* took 21% of the total R&D budget, about equally divided between Federal Government and private industry financing. The remaining two-thirds of the R&D budget was devoted to *Development*, with somewhat more than half of it financed by private industry. This overall pattern of spending and funding has remained very much unchanged over the last 30 years.

Industrial funding of R&D is concentrated in a handful of manufacturing industries and, over the years, the growth of this funding has been closely



e-estimated



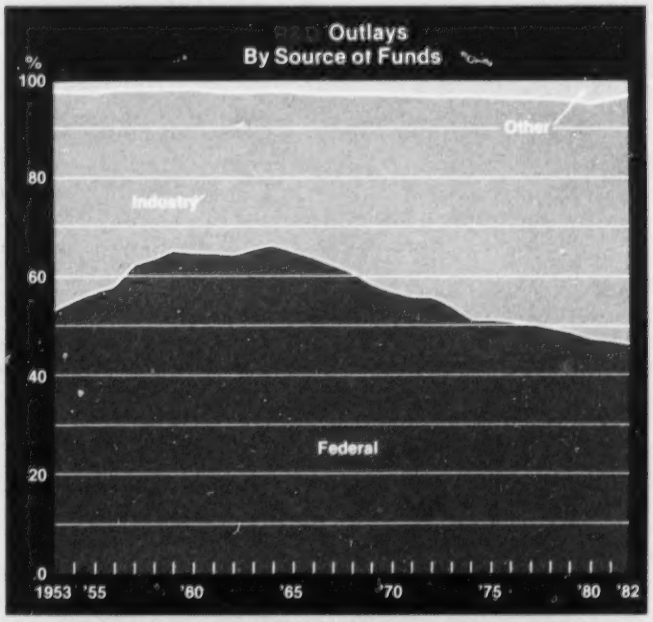


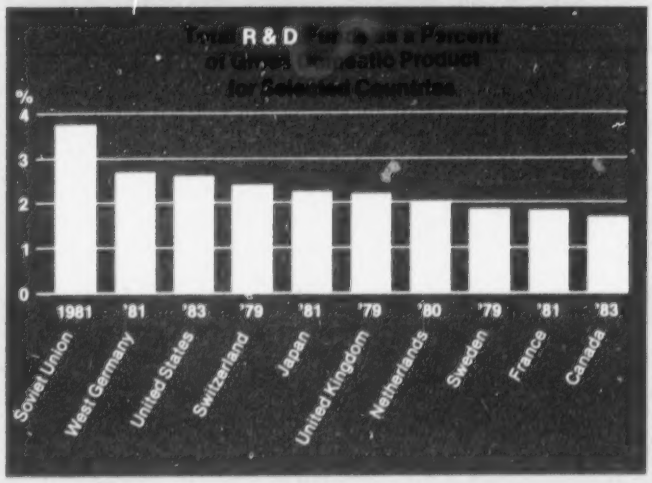
tied to the growth in sales. For example, in 1980, companies involved in the manufacture of machinery spent just under 5% of their sales revenue on R&D—in addition to whatever funds were available from government or other sources. That 5% ratio has changed very little in the last three decades, which implies, then, that R&D financing is effectively treated as part of the overhead charge. The extent of an industrial R&D project, in terms of its funding level or time schedule is, then, initially determined more by the financial health of the company than by the size and scope of the project envisioned.

Just as company R&D can be related to sales revenue, national R&D can be tied to GNP. Almost all the world's R&D effort is concentrated in about 10 highly developed, technologically advanced countries. Year after year, these countries generally spend the equivalent of between 1½% and 2½% of GNP on R&D.

Ken Goldstein

Sources: National Science Foundation; The Conference Board.





ECONOMIC ROAD MAPS

Eva Culen, Editor Chuck N. Tow, Chief Chartist

Prepared in The Business Conditions Analysis Department—Lora S. Collins, Director
Prices for Quantities of this chart will be supplied on request to Information Service.

Published by
THE CONFERENCE BOARD, INC.
845 Third Avenue, New York, N.Y. 10022 Avenue Louise, 207 Bte 5 B-1050 Brussels, Belgium
THE CONFERENCE BOARD OF CANADA
25 McArthur Road, Ottawa, Ontario K1L-6R3, Canada

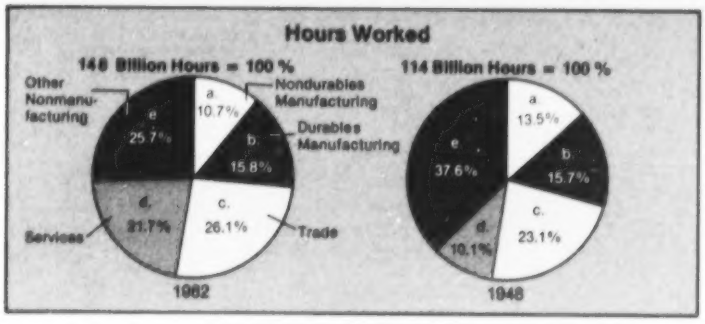
THE CONFERENCE BOARD

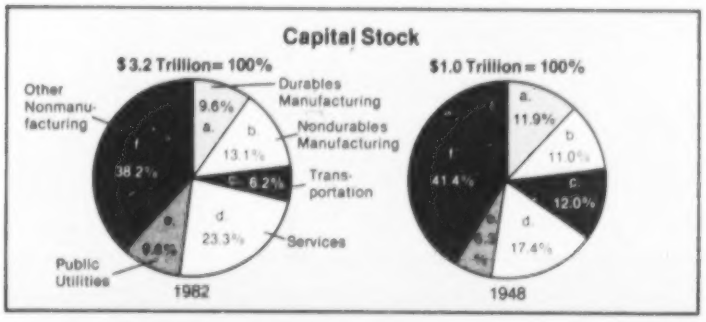
Capital Invested

Economic Road Maps
No. 1957

August, 1983

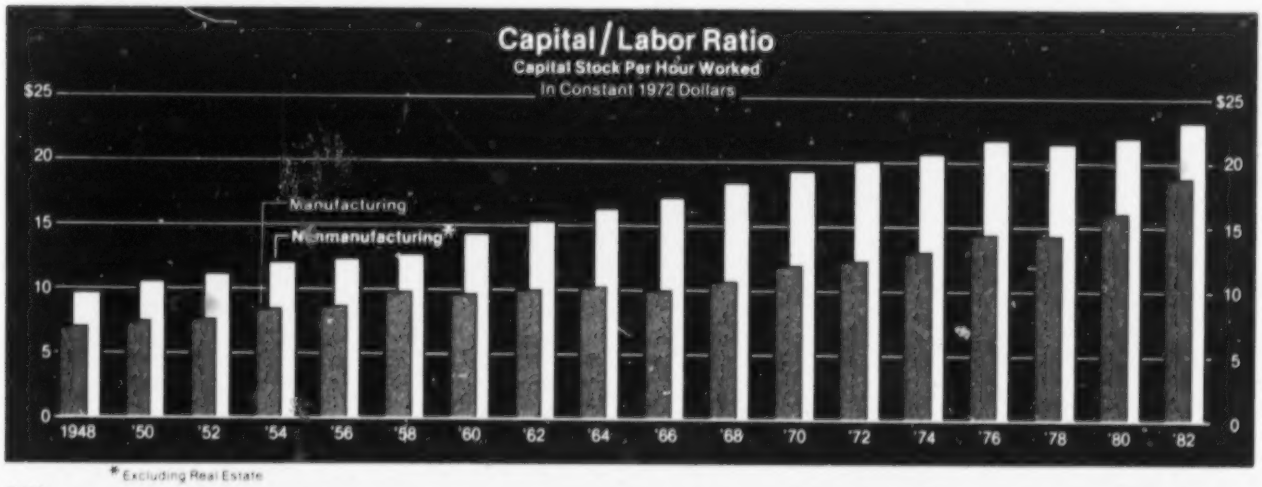
Labor and capital are the essential inputs in the production process. Raw materials or ideas are turned into finished product with the necessary tools in properly trained hands. Some processes are relatively labor intensive—that is, they require more labor input relative to capital input. Other processes are relatively capital intensive. In general, the capital stock has been rising faster than the number of hours worked over the last 35 years. As a result, the economywide capital/labor ratio has been rising, and that rise has been related to the growth of labor productivity. The slowdown in productivity gains in the late 1970's has been partly attributed to a slower rise in capital/labor ratios (see Road Map #1932 and 1933).





Labor input is generally measured in terms of the number of hours worked. In 1982, a total of 148 billion hours were put in on private-sector jobs. The broad labor input measures used here make no distinction as to who worked those hours although, obviously, not all workers are equally productive. There are similar problems in calculating an overall measure for capital. It is measured here in terms of the deflated, or constant dollar, book value of land, inventory and fixed capital (that is, structures and equipment). Changes in deflated land values are, for the most part, inconsequential. Goods producers tend to keep about 1½ months' worth of sales on hand in inventory. Growth in inventory, then, is tied to their overall rate of activity. Inventory is nonexistent for service providers. Growth in the stock of capital is principally a reflection of additional buildings and/or machinery.

The deflated value of the capital stock has been growing at an average annual rate of just under 3½% over the last 35 years. The number of hours worked has been increasing at an

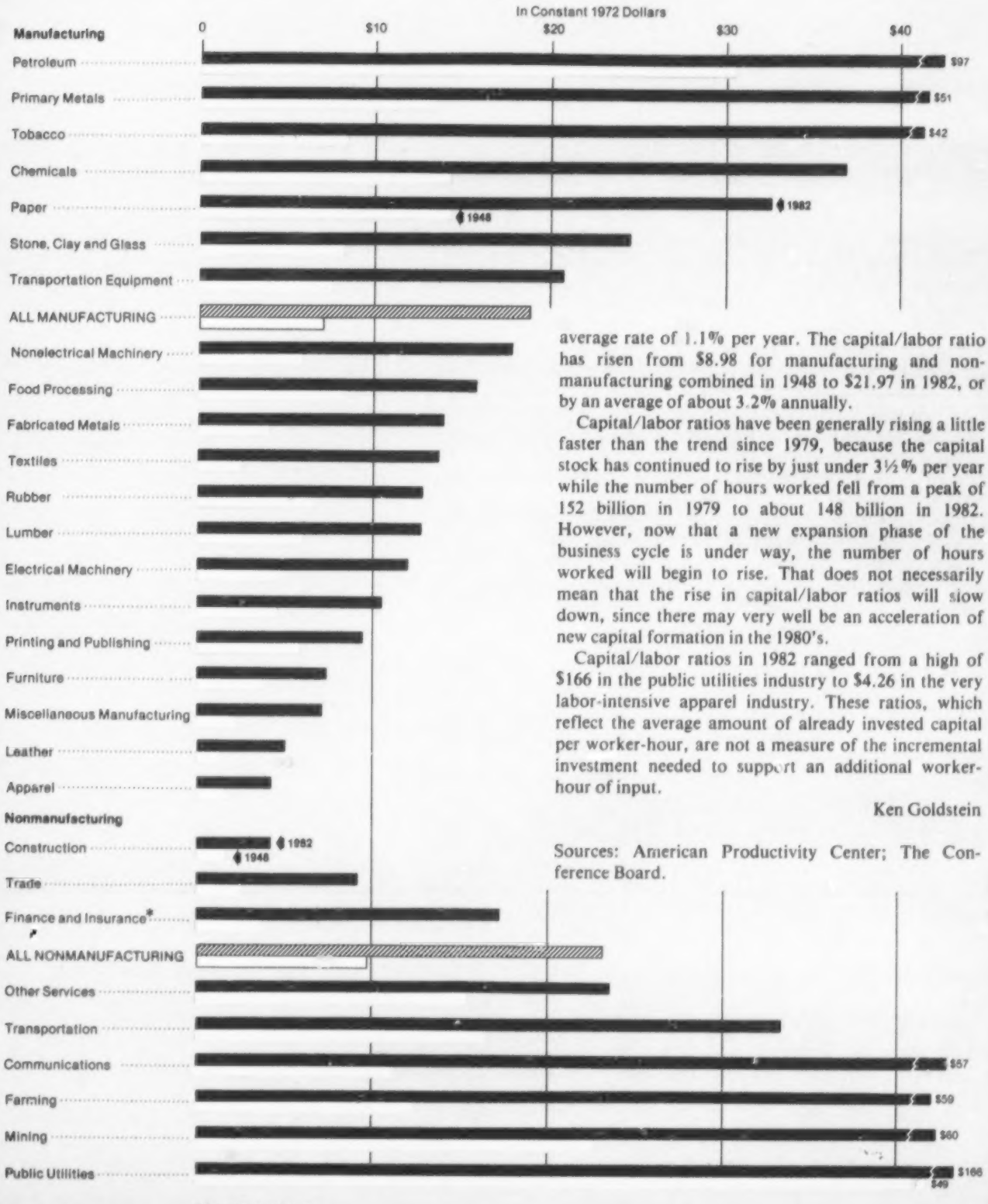


* Excluding Real Estate

01/87

Capital/Labor Ratio

Capital Stock Per Hour Worked



* Excluding Real Estate

average rate of 1.1% per year. The capital/labor ratio has risen from $8.98 for manufacturing and non-manufacturing combined in 1948 to $21.97 in 1982, or by an average of about 3.2% annually.

Capital/labor ratios have been generally rising a little faster than the trend since 1979, because the capital stock has continued to rise by just under 3½% per year while the number of hours worked fell from a peak of 152 billion in 1979 to about 148 billion in 1982. However, now that a new expansion phase of the business cycle is under way, the number of hours worked will begin to rise. That does not necessarily mean that the rise in capital/labor ratios will slow down, since there may very well be an acceleration of new capital formation in the 1980's.

Capital/labor ratios in 1982 ranged from a high of $166 in the public utilities industry to $4.26 in the very labor-intensive apparel industry. These ratios, which reflect the average amount of already invested capital per worker-hour, are not a measure of the incremental investment needed to support an additional worker-hour of input.

Ken Goldstein

Sources: American Productivity Center; The Conference Board.

ECONOMIC ROAD MAPS

Eva Galen, Editor Chuck N. Tow, Chief Chartist

Prepared in The Business Conditions Analysis Department — Lora S. Collins, Director

Prices for Quantities of this chart will be supplied on request to Information Service.

Published by

THE CONFERENCE BOARD, INC.

845 Third Avenue, New York, N.Y. 10022 Avenue Louise, 207 Bte 5 B-1050 Brussels, Belgium

THE CONFERENCE BOARD OF CANADA

25 McArthur Road, Ottawa, Ontario K1L 6R3, Canada

The Conference Board

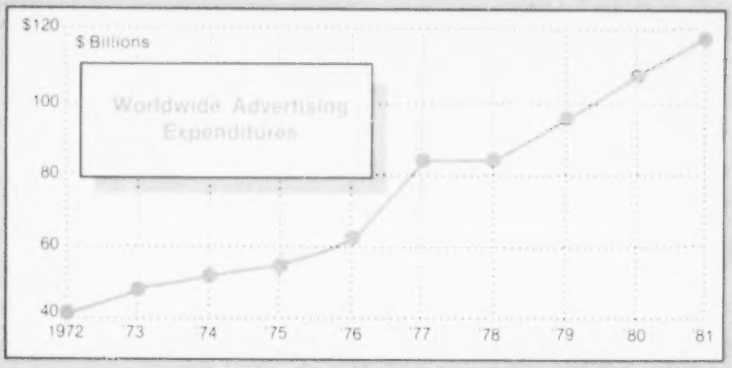
Advertising Expenditures

Economic Road Maps

Nos. 1958-1959

September, 1983

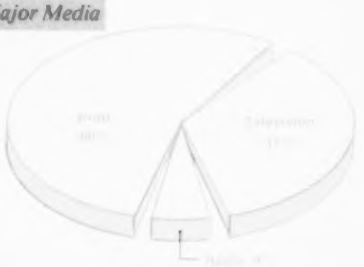
Worldwide advertising expenditures totaled an estimated $118.4 billion in 1981, the latest year for which figures are available. This represents a gain of 9.2% from 1980, considerably below the 14½% annual average growth of the preceding five years. But, seen in the context of the world economic slowdown, the 1981 increase was quite strong; in previous recessions, advertising had usually suffered a setback. The United States is by far the biggest advertising country, accounting for 52% of total worldwide advertising spending in 1981. (The advertising outlays referred to here are the expenditures made for space and time in advertising media.)



Distribution of Advertising Expenditures, 1981

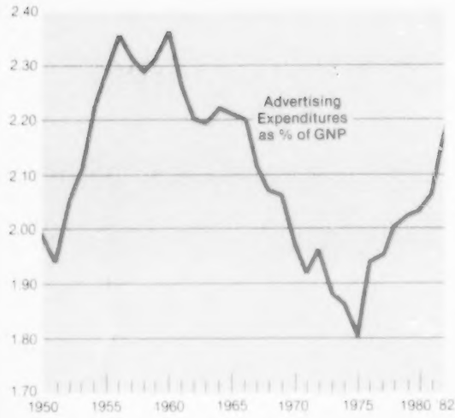
By Region

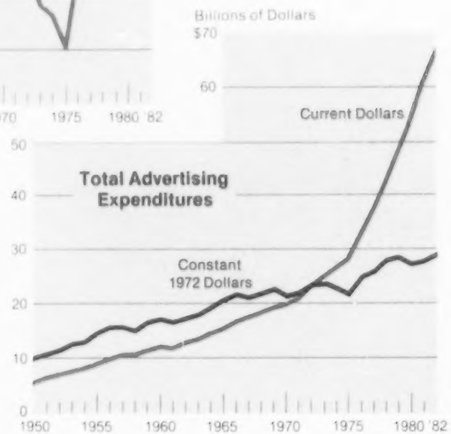
By Major Media

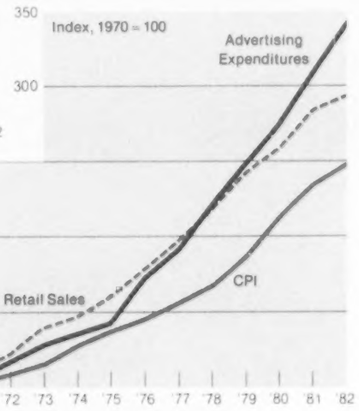


The postwar economic recovery in Western Europe and Japan and the advent of the consumer society have brought a growing awareness of the importance of advertising as a marketing tool. As living standards grew, advertising boomed. Of all media, newspapers remain the single most important vehicle for advertising. However, in the western industrial countries, the advent of new media has resulted in major shifts of advertising budgets, especially to television—both network and local.

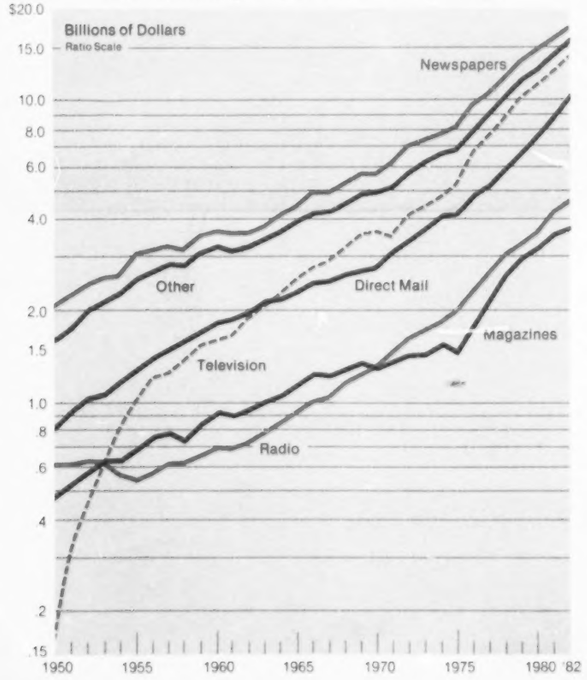
United States Advertising







Advertising Expenditures by Media

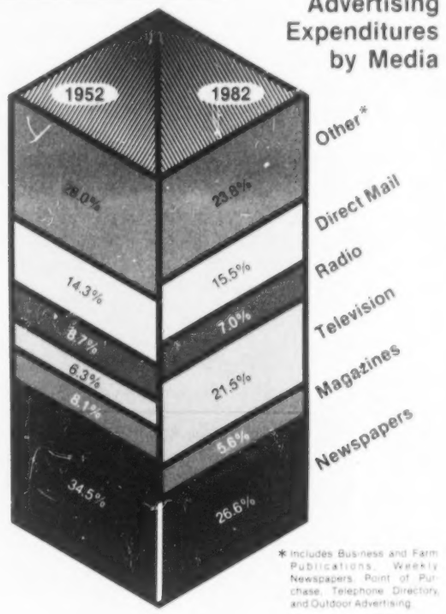


The growth of cable television will further change the way advertising money is spent. One must bear in mind, however, that television advertising time is strictly limited in a number of countries. Easing of government restrictions would result in a much faster rise in television advertising.

By any available standard of measurement, the United States leads the world in advertising outlays—be it in overall expenditures, per capita expenditures, or expenditures as a percent of GNP. Of the major industrial countries, Japan, the U.K., West Germany and France are other large advertisers, but of these only the U.K. spends an amount greater than 1% of its GNP. (Other countries, such as Finland, Australia and Argentina spend amounts equal to more than 1½% of GNP.) With the exception of the U.K. and Italy, the fastest growth in advertising outlays in recent years has been in newly developing countries such as India, Indonesia, Taiwan and Argentina. Aggregate expenditures in these countries are still relatively small, with only Argentina spending in excess of $1 billion, but their outlays have been growing at a rate of about 25% annually since 1976. For the remainder of this decade advertising expenditures outside the United States are expected to rise at a rate exceeding that of this country.

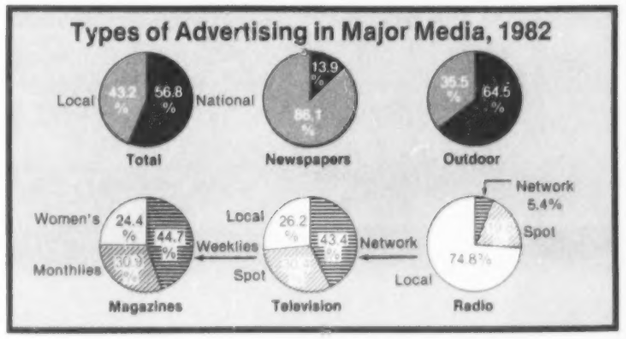
United States advertising expenditures were an estimated $66.6 billion in 1982, an increase of 10% over 1981. Advertising spending tends to decline during economic slowdowns and rise with the recovery, but the recent performance went against the trend: Outlays went up in real terms as well. The constant dollar outlays charted here are deflated by the consumer price index rather than by the composite unit price index, which goes back only to 1960. (In either case, with very rare exceptions, they have moved similarly over time.) Between the mid-1950s and the mid-1960s, the ratio of advertising to GNP ran at an average of 2.2% annually. It then took a sharp downturn, touching bottom at 1.8% in 1975. With the 1976 economic recovery, advertising spending boomed and the ratio to GNP moved to 2.18% in 1982. Estimates for 1983 are for advertising to rise faster than GNP once again, in which case the ratio to GNP will rise above 2.2 percent.

Distribution of Advertising Expenditures by Media

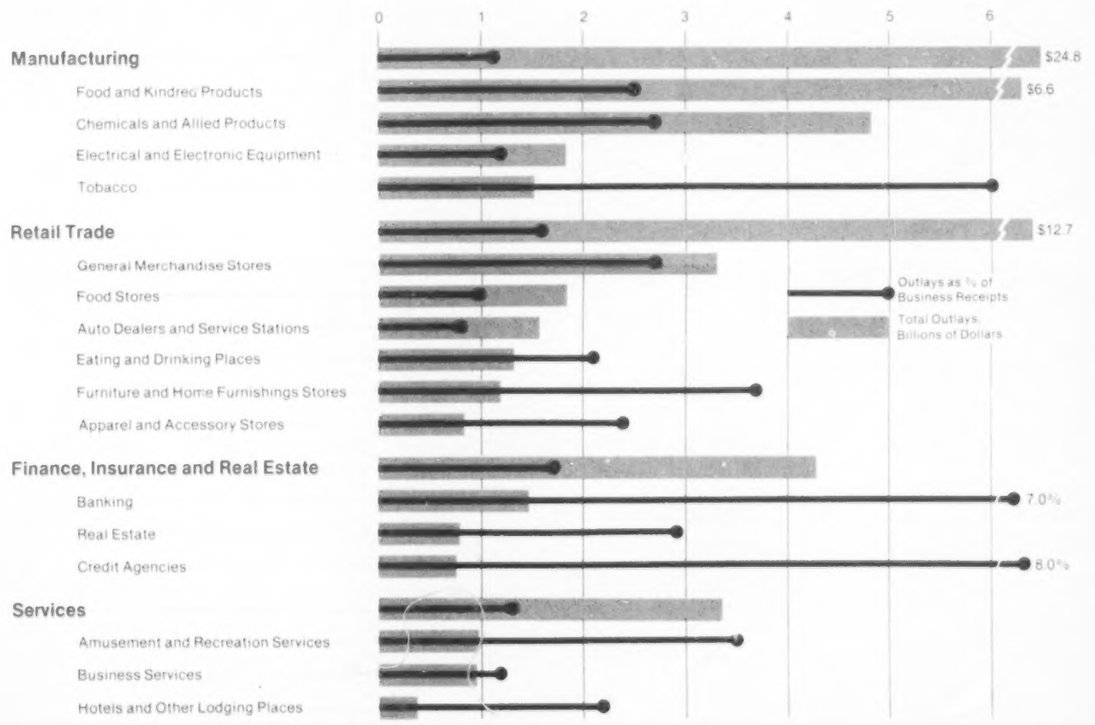


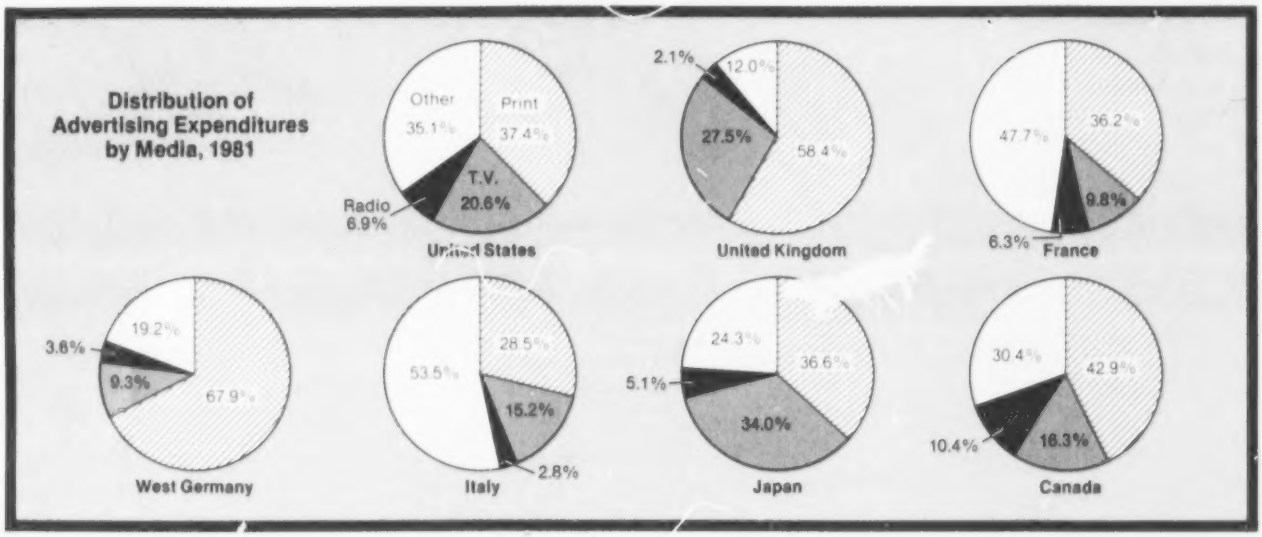
* Includes Business and Farm Publications, Weekly Newspapers, Point of Purchase, Telephone Directory, and Outdoor Advertising.

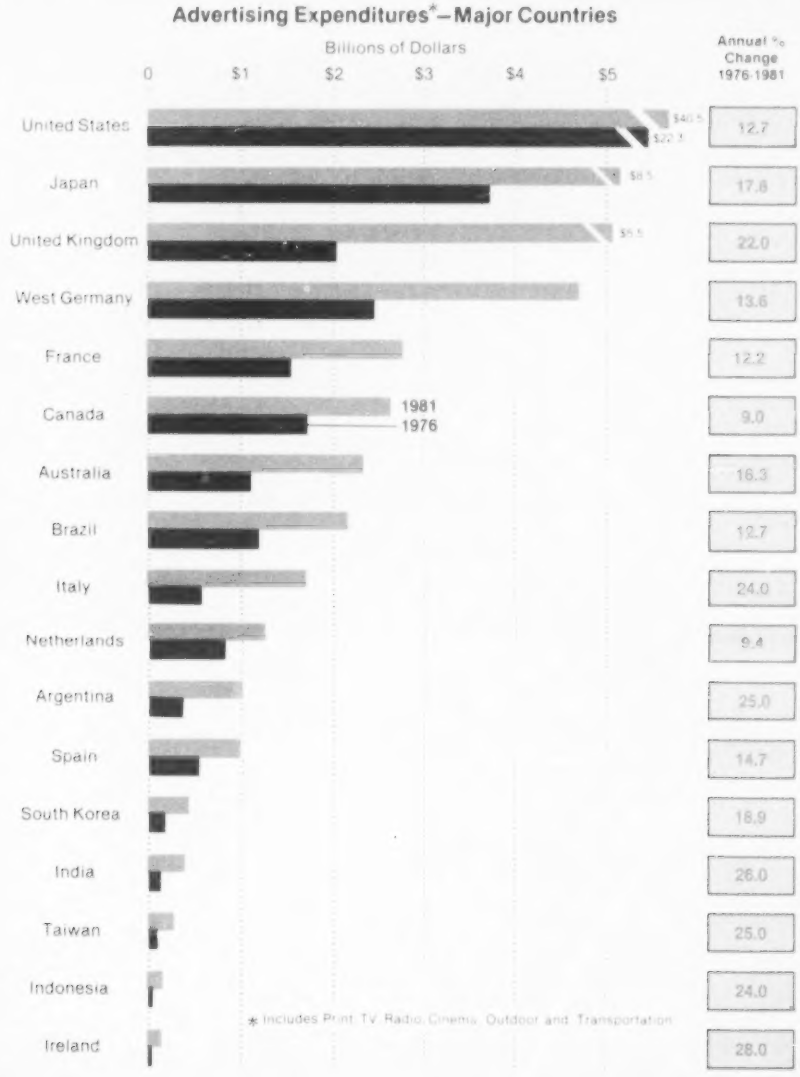
Types of Advertising in Major Media, 1982



Advertising Outlays—Selected Industries, 1980







Newspapers accounted for $17.7 billion of total United States advertising expenditures in 1982, followed by television and direct mail, with $14.3 and $10.3 billion respectively. Direct mail advertising grew by an average of 15% over the past five years, making it the fastest growing ad component; newspaper spending went up 10½% annually during the same period. While more than half of advertising money is spent on national advertising, local advertising accounts for over three quarters of total spending for radio and newspaper ads.

Data for 1980 (the latest available) show that manufacturing has the largest advertising budget of the major business sectors, followed by retail trade. Measured in terms of advertising as a percent of business receipts, the heaviest spenders include the tobacco manufacturers and financial institutions.

Eva Culen

Sources: Bureau of Economic Analysis; Internal Revenue Service; McCann-Ericson Inc.; Starch INRA Hooper, Inc: "World Advertising Expenditures"; The Conference Board.

ECONOMIC ROAD MAPS

Eva Culen, Editor — Chuck N. Tow, Chief Chartist

Prepared in The Business Conditions Analysis Department—Lora S. Collins, Director
Prices for Quantities of this chart will be supplied on request to Information Service.

Published by
THE CONFERENCE BOARD, INC.
845 Third Avenue, New York, N.Y. 10022 Avenue Louise, 207 Bte 5 B-1050 Brussels, Belgium
THE CONFERENCE BOARD OF CANADA
25 McArthur Road, Ottawa, Ontario K1L-6R3, Canada